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SHENZHEN GROWATT NEW ENERGY TECHNOLOGY CO.,LTD.

# Enkel Fase Omvormers

Growatt 1000S/1500S/2000/3000

Growatt 4000/4400/5000

Growatt 2500MTL/3000MTL

Growatt 3600MTL/4200MTL/5000MTL

Growatt 2000HF/2500HF/3000HF





## Growatt 1000S/ 1500S / 2000 / 3000

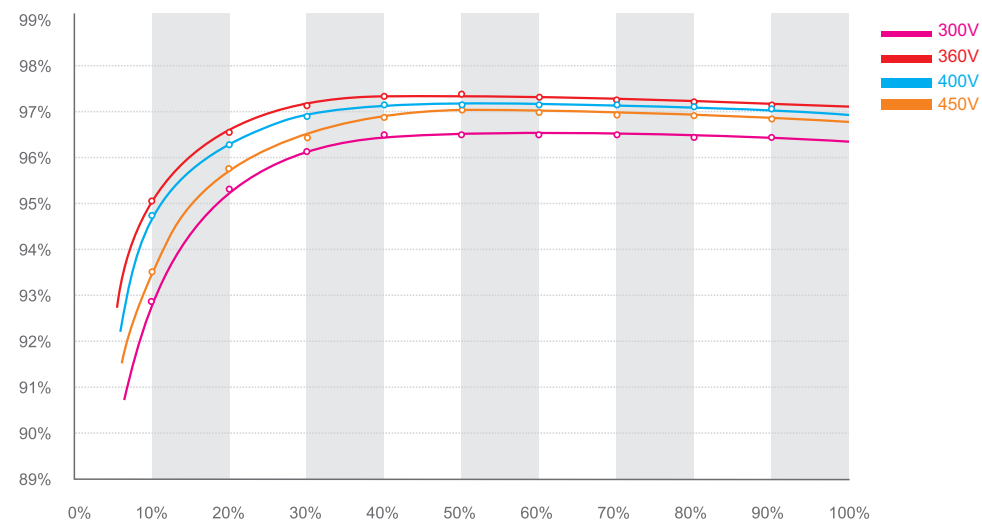
### Toonaangevende efficiëntie

- Maximale efficiëntie van 97,3% en breed input voltage bereik
- Compact Design
- Geluids controle
- Interne DC schakelaar
- MTL - String
- Makkelijke installatie
- Transformatorloos GT technologie
- Ethernet / RF technology / Wi-Fi
- Uitgebreid Growatt garantie programma

### Europe ENS

- Multi-taal display
- Gemakkelijke nationale instellingen van 'line supply monitoring' (ENS)
- Landelijke configuraties
- Momenteel beschikbaar voor Duitsland, Oostenrijk, Frankrijk, Zwitserland, Groot Brittannië, Italië en Spanje, etc.

### 3k efficiency



	Growatt 1000S	Growatt 1500S	Growatt 2000	Growatt 3000
<b>Invoer Data</b>				
Max. DC power	1300W	1800W	2300W	3200W
Max. DC voltage	450V	450V	500V	500V
Start voltage	90V	150V	150V	150V
PV voltage bereik	70V - 450V	100V - 450V	100V - 500V	100V - 500V
MPPT werk voltage bereik/ nominaal bereik	70V-450V/180V	120V-450V/360V	120V-500V/360V	120V-500V/360V
Max. DC voltage bereik	110V - 400V	175V - 450V	195V-450V	250V - 450V
Aantal MPP trackers/ strings per MPP tracker	1 / 1	1 / 1	1 / 2	1 / 2
Max invoer stroom/per string	10A/10A	10A/10A	12A/12A	15A/15A
<b>Output (AC)</b>				
Nominale AC-uitgangsstroom	1000W	1600W	2000W	2850W
Max. AC vermogen	1100W	1650W	2200W	3000W
Max. uitgangsstroom	5.5A	8A	11A	15A
AC nominaal voltage; range	220V/230V/240V; 180Vac-280Vac	220V/230V/240V; 180Vac-280Vac	220V/230V/240V; 180Vac-280Vac	220V/230V/240V; 180Vac-280Vac
AC grid frequency ;range	50Hz, 60Hz; ± 5Hz	50Hz, 60Hz; ± 5Hz	50Hz, 60Hz;±5Hz	50Hz, 60Hz;±5Hz
Power factor	1	1	1	1
THDI	<3%	<3%	<3%	<3%
AC aansluiting	Single phase	Single phase	Single phase	Single phase
<b>Efficiëntie</b>				
Max. Efficiëntie	97%	97%	97.3%	97.3%
Euro-eta	95.5%	96.5%	96.5%	96.5%
MPPT efficiëntie	99.5%	99.5%	99.5%	99.5%
<b>Beveiliging Componenten</b>				
DC polariteit beveiliging	yes	yes	yes	yes
DC schakelaar voor elke MPPT	yes	yes	yes	yes
Stroom beveiliging	yes	yes	yes	yes
Vermogen over-voltage beveiliging	yes	yes	yes	yes
Aarding monitoring	yes	yes	yes	yes
Grid monitoring	yes	yes	yes	yes
Geïntegreerde stroom-lekkage monitoring unit	yes	yes	yes	yes
<b>Algemene Informatie</b>				
Dimensions (W / H / D) in mm	271/267/127	271/267/127	360/329/132	360/329/132
Gewicht	5KG	5KG	11.7KG	12.2KG
Operationele temperatuur bereik	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C
Geluidsniveau	≤ 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
Topologie	Transformerless	Transformerless	Transformerless	Transformerless
Cooling concept	Natural	Natural	Natural	Natural
Beveiligingsgraad	IP 65	IP 65	IP 65	IP 65
Hoogte	2000m without derating	2000m without derating	2000m without derating	2000m without derating
Relatieve Vochtigheid	0~95%	0~95%	0~95%	0~95%
<b>Componenten</b>				
DC aansluiting	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC aansluiting	Screw terminal	Screw terminal	Screw terminal	Screw terminal
Display	LCD	LCD	LCD	LCD
Interfaces: RS232/RS485/ Bluetooth/RF/Wi-Fi	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt
Garantie 5 jaar/10 jaar	yes / opt	yes / opt	yes / opt	yes / opt
<b>Certificaten</b>				
CE, VDE 0126-1-1, G83/1-1, G59/2, RD1663, EN50438, VDE-AR-N4105, IEC-62109, ENEL-Guide, CEI 0-21, MEA (1000S-1500S: CE, VDE 0126-1-1, G83, IEC-62109)				





## Growatt 4000 / 4400 / 5000

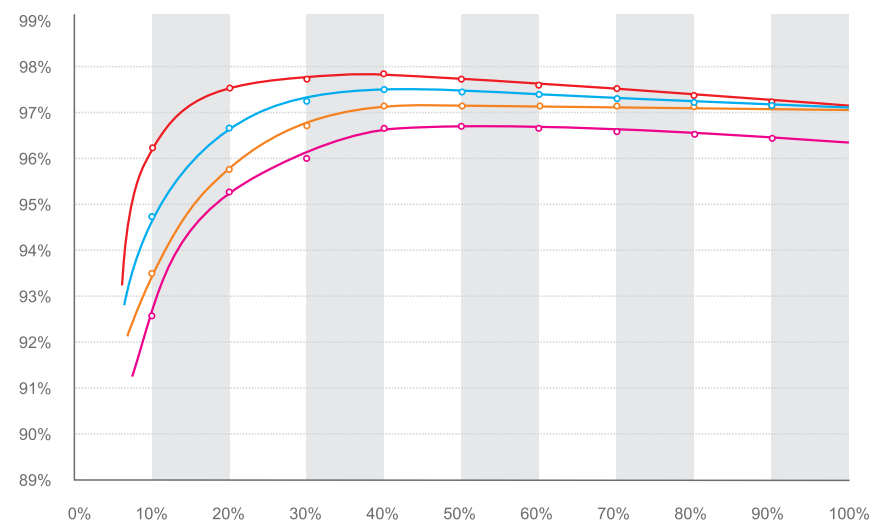
### Toonaangevende efficiëntie

- Maximale efficiëntie van 97,8% en breed input voltage bereik
- Compact Design
- Geluidscontrole
- Interne DC schakelaar
- MTL - String
- Makkelijke installatie
- Transformatorloze GT technologie
- Ethernet / RF technology / Wi-Fi
- Uitgebreid Growatt garantie programma

### Europe ENS

- Multi-taal display
- Gemakkelijke nationale instellingen van 'line supply monitoring' (ENS)
- Landelijke configuraties
- Momenteel beschikbaar voor Duitsland, Oostenrijk, Frankrijk, Zwitserland, Groot Brittannië, Italië en Spanje, etc.

5k efficiency



### Growatt 4000

### Growatt 4400

### Growatt 5000

	Growatt 4000	Growatt 4400	Growatt 5000
<b>Invoer Data</b>			
Max. DC power	4200W	4600W	5200W
Max. DC voltage	580V	580V	580V
Start voltage	150V	150V	150V
PV voltage bereik	100V - 580V	100V - 580V	100V - 580V
MPPT werk voltage bereik/ nominaal bereik	120V-580V/360V	120V-580V/180V	120V-580V/360V
Max. DC voltage bereik	250V - 500V	250V - 500V	250V - 500V
Aantal MPP trackers/ strings per MPP tracker	1 / 3	1 / 3	1 / 3
Max invoer stroom/per string	20A/20A	20A/20A	20A/20A
<b>Output (AC)</b>			
Nominale AC-uitgangsstroom	3680W	4200W	4600W
Max. AC vermogen	4000W	4400W	5000W
Max. uitgangsstroom	16A	21A	22.7A
AC nominaal voltage; range	220V/230V/240V; 180Vac-280Vac	220V/230V/240V; 180Vac-280Vac	220V/230V/240V; 180Vac-280Vac
AC grid frequency ;range	50Hz, 60Hz;±5Hz	50Hz, 60Hz;±5Hz	50Hz, 60Hz;±5Hz
Power factor	1	1	1
THDI	<3%	<3%	<3%
AC aansluiting	Single phase	Single phase	Single phase
<b>Efficiëntie</b>			
Max. Efficiëntie	97.8%	97.8%	97.6%
Euro-eta	97.4%	97.4%	97.2%
MPPT efficiëntie	99.5%	99.5%	99.5%
<b>Beveiliging Componenten</b>			
DC polariteit beveiliging	yes	yes	yes
DC schakelaar voor elke MPPT	yes	yes	yes
Stroom beveiliging	yes	yes	yes
Vermogen over-voltage beveiliging	yes	yes	yes
Aarding monitoring	yes	yes	yes
Grid monitoring	yes	yes	yes
Geïntegreerde stroom-lekkage monitoring unit	yes	yes	yes
<b>Algemene Informatie</b>			
Dimensions (W / H / D) in mm	406/406/192	406/406/192	406/406/192
Gewicht	21KG	21KG	21KG
Operationele temperatuur bereik	-25 °C ... +60 °C with derating above 45°C	-25 °C ... +60 °C with derating above 45°C	-25 °C ... +60 °C with derating above 45°C
Geluidsniveau	≤25 dB(A)	≤25 dB(A)	≤25 dB(A)
Self-Consumption night	<0.5W	<0.5W	<0.5W
Standby consumption	< 5 W	< 5 W	< 5 W
Topologie	Transformerless	Transformerless	Transformerless
Cooling concept	Natural	Natural	Natural
Beveiligingsgraad	IP 65	IP 65	IP 65
Hoogte	2000m without derating	2000m without derating	2000m without derating
Relatieve Vochtigheid	0~95%	0~95%	0~95%
<b>Componenten</b>			
DC aansluiting	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC aansluiting	Screw terminal	Screw terminal	Screw terminal
Display	LCD	LCD	LCD
Interfaces: RS232/RS485/ Bluetooth/RF/Wi-Fi	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt
Garantie 5 jaar/10 jaar	yes / opt	yes / opt	yes / opt
<b>Certificaten</b>			
CE, VDE 0126-1-1, DK5940, G83/1-1, G59/2, RD1663, EN50438, VDE-AR-N4105, CEI-021, IEC-62109, ENEL-Guide			



## Growatt 2500 MTL / 3000 MTL

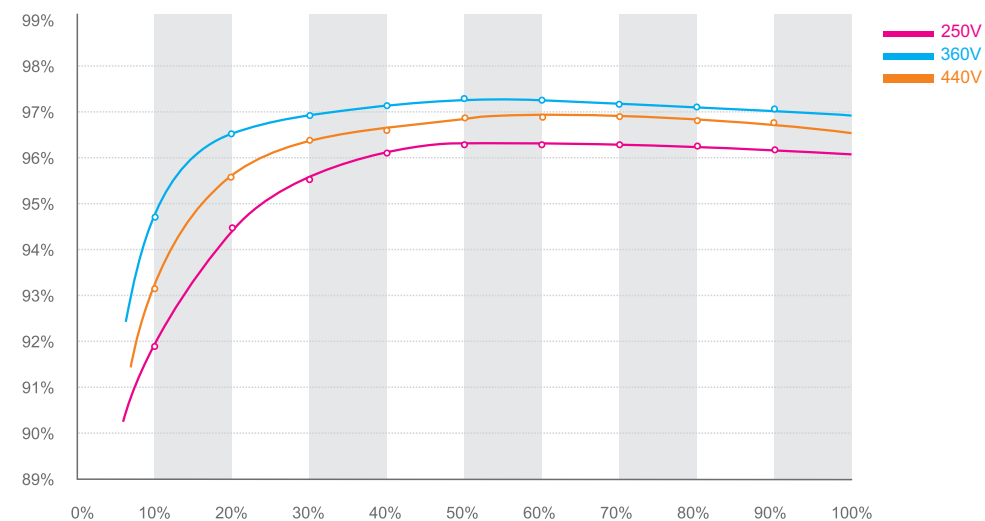
### Leading - edge Technology

- Maximum efficiency of 97.5% and wide input voltage range
- Internal DC switch
- Transformerless GT topology
- Compact design
- MTL - String
- Bluetooth / RF technology / Wi-Fi
- 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.

3k efficiency



### Growatt 2500 MTL

### Growatt 3000 MTL

#### Invoer Data

Max. DC power	2700W	3200W
Max. DC voltage	500V	500V
Start voltage	150V	150V
PV voltage bereik	100V - 500V	100V - 500V
MPPT werk voltage bereik/ nominaal bereik	120V-500V/360V	120V-500V/360V
Max. DC voltage bereik	190V - 450V	190V - 450V
Aantal MPP trackers/strings per MPP tracker	2 / 1	2 / 1
Max invoer stroom/per string	10A / 10A	10A / 10A
Max. input current per string of tracker A/tracker B	10A / 10A	10A / 10A

#### Output (AC)

Nominale AC-uitgangsstroom	2500W	3000W
Max. AC vermogen	2500W	3000W
Max. uitgangsstroom	12.5A	15A
AC nominaal 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 aansluiting	Single phase	Single phase

#### Efficiëntie

Max. Efficiëntie	97.5%	97.5%
Euro-eta	97%	97%
MPPT efficiëntie	99.5%	99.5%

#### Beveiliging Componenten

DC polariteit beveiliging	yes	yes
DC schakelaar voor elke MPPT	yes	yes
Stroom beveiliging	yes	yes
Vermogen over-voltage beveiliging	yes	yes
Aarding monitoring	yes	yes
Grid monitoring	yes	yes
Geïntegreerde stroom-lekkage monitoring unit	yes	yes

#### Algemene Informatie

Dimensions (W / H / D) in mm	360/421/152	360/421/152
Gewicht	15.6KG	15.6KG
Operationele temperatuur bereik	-30 °C ... +60 °C	-30 °C ... +60 °C
Geluidsniveau	≤25 dB(A)	≤25 dB(A)
Self-Consumption night	< 0.5 W	< 0.5 W
Topologie	Transformerless	Transformerless
Cooling concept	Natural	Natural
Beveiligingsgraad	IP 65	IP 65
Hoogte	2000m without derating	2000m without derating
Relatieve Vochtigheid	0~95%	0~95%

#### Componenten

DC aansluiting	H4/MC4(opt)	H4/MC4(opt)
AC aansluiting	Screw terminal	Screw terminal
Display	LCD	LCD
Interfaces: RS232/RS485/ Bluetooth/RF/Wi-Fi	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt
Garantie 5 jaar/10 jaar	yes / opt	yes / opt

#### Certificaten

CE, VDE 0126-1-1, VDE-AR-N4105, G83, IEC-62109, CEI 0-21, As4777, AS/NZS 3100



## Growatt 3600MTL / 4200MTL / 5000MTL

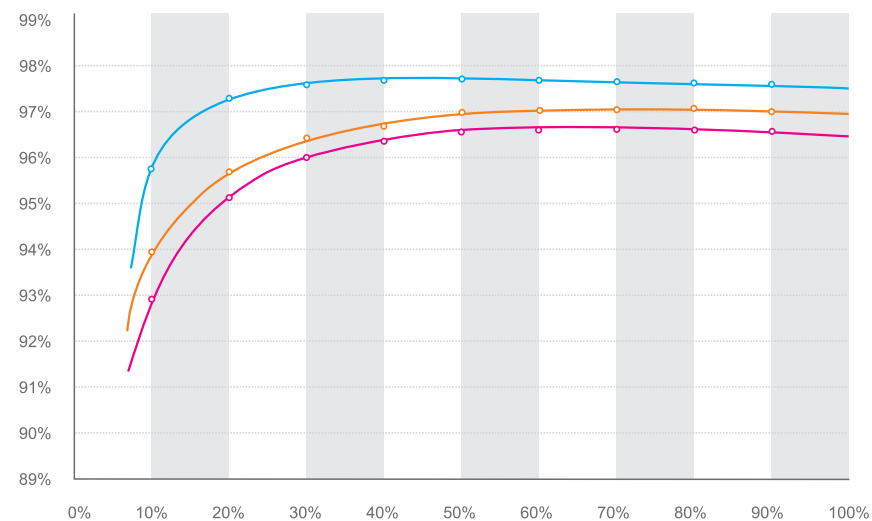
### Leading - edge Technology

- Maximum efficiency of 97.9% and wide input voltage range
- Internal DC switch
- Transformerless GT topology
- Compact design
- Multi MPP controller
- MTL - String
- Bluetooth / RF technology / Wi-Fi
- 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.

### 5k efficiency



250V  
380V  
500V



### Growatt 3600MTL

### Growatt 4200MTL

### Growatt 5000MTL

#### Invoer Data

Max. DC power	3800W	4400W	5200W
Max. DC voltage	600V	600V	600V
Start voltage	150V	150V	150V
PV voltage bereik	100V-600V	100V-600V	100V-600V
MPPT werk voltage bereik/ nominaal bereik	120V-600V/360V	120V-600V/360V	120V-600V/360V
Max. DC voltage bereik	190V-580V	175V-580V	175V-580V
Aantal MPP trackers/ strings per MPP tracker	2 / 2	2 / 2	2 / 2
Max invoer stroom/per string	10A / 10A	15A / 15A	15A / 15A
Max. input current per string of tracker A/tracker B	10A / 10A	15A / 15A	15A / 15A

#### Output (AC)

Nominale AC-uitgangsstroom	3600W	4200W	5000W
Max. AC vermogen	3600W	4200W	5000W
Max. uitgangsstroom	18A	21A	25A
AC nominaal voltage; range	220V/230V/240V; 180Vac - 280Vac	220V/230V/240V; 180Vac - 280Vac	220V/230V/240V; 180Vac - 280Vac
AC grid frequency ;range	50Hz, 60Hz /± 5Hz	50Hz, 60Hz /± 5Hz	50Hz, 60Hz /± 5Hz
Power factor	1	1	1
THDI	<3%	<3%	<3%
AC aansluiting	Single phase	Single phase	Single phase

#### Efficiëntie

Max. Efficiëntie	97.6%	97.9%	97.6%
Euro-eta	97%	97.4%	97.2%
MPPT efficiëntie	99.5%	99.5%	99.5%

#### Beveiliging Componenten

DC polariteit beveiliging	yes	yes	yes
DC schakelaar voor elke MPPT	yes	yes	yes
Stroom beveiliging	yes	yes	yes
Vermogen over-voltage beveiliging	yes	yes	yes
Aarding monitoring	yes	yes	yes
Grid monitoring	yes	yes	yes
Geïntegreerde stroom-lekkage monitoring unit	yes	yes	yes

#### Algemene Informatie

Dimensions (W / H / D) in mm	360/510/188	360/510/188	360/510/188
Gewicht	24KG	24KG	24KG
Operationele temperatuur bereik	-25 °C ... +60 °C with derating above 45°C	-25 °C ... +60 °C with derating above 45°C	-25 °C ... +60 °C with derating above 45°C
Geluidsniveau	≤25 dB(A)	≤25 dB(A)	≤25 dB(A)
Self-Consumption night	< 0.5W	< 0.5W	< 0.5W
Standby consumption	< 5 W	< 5 W	< 5 W
Topologie	Transformerless	Transformerless	Transformerless
Cooling concept	Natural	Natural	Natural
Beveiligingsgraad	IP 65	IP 65	IP 65
Hoogte	2000m without derating	2000m without derating	2000m without derating
Relatieve Vochtigheid	0~95%	0~95%	0~95%

#### Componenten

DC aansluiting	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC aansluiting	Screw terminal	Screw terminal	Screw terminal
Display	LCD	LCD	LCD
Interfaces: RS232/RS485/ Bluetooth/RF/Wi-Fi	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt
Garantie 5 jaar/10 jaar	yes / opt	yes / opt	yes / opt

#### Certificaten

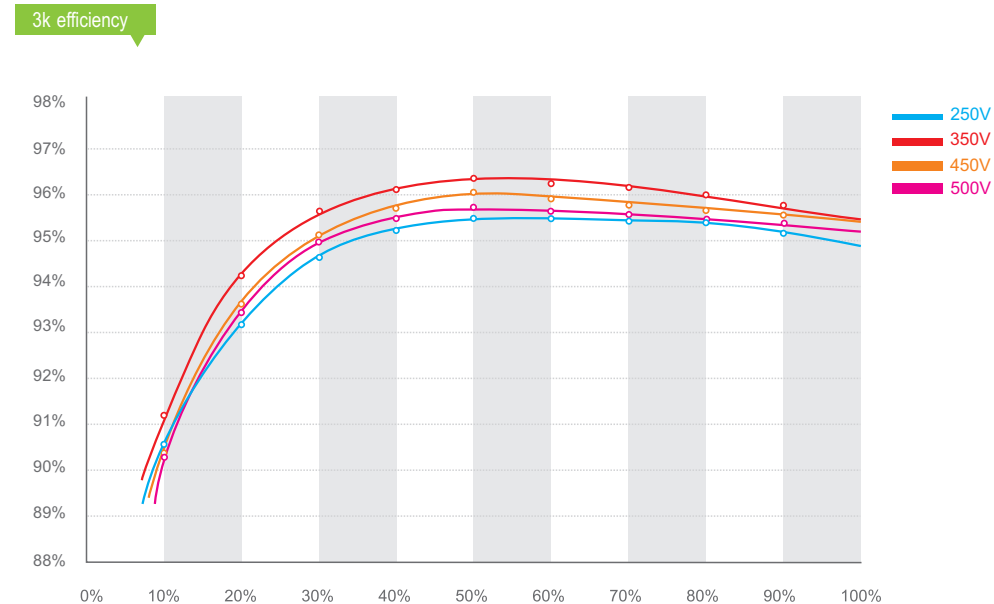
CE, VDE 0126-1-1, CGC, DK5940, G59/2, G83/1-1, RD1663, RD1699, EN50438, IEC-62109, ENEL-Guide, AS4777, AS/NZS 3100



## 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
- Bluetooth / RF technology / Wi-Fi
- Sound control
- Fanless cooling concept
- Easy installation
- Heel betrouwbaar.



### Growatt 2000HF

### Growatt 2500HF

### Growatt 3000HF

#### Invoer Data

Max. DC power	2200W	2700W	3200W
Max. DC voltage	600V	600V	600V
Start voltage	150V	150V	150V
PV voltage bereik	100V - 600V	100V - 600V	100V - 600V
MPPT werk voltage bereik/ nominiaal bereik	120V - 600V/380V	120V - 600V/380V	120V - 600V/380V
Max. DC voltage bereik	195V - 480V	195V - 480V	250V - 480V
Aantal MPP trackers/ strings per MPP tracker	1 / 2	1 / 2	1 / 2
Max invoer stroom/per string	12A / 12A	15A / 15A	15A / 15A

#### Output (AC)

Nominale AC-uitgangsstroom	2000W	2500W	3000W
Max. AC vermogen	2000W	2500W	3000W
Max. uitgangsstroom	10A	12A	14.3A
AC nominaal voltage; range	220V/230V/240V; 180Vac-280Vac	220V/230V/240V; 180Vac-280Vac	220V/230V/240V; 180Vac-280Vac
AC grid frequency ;range	50Hz,60Hz;±5Hz	50Hz,60Hz;±5Hz	50Hz,60Hz;±5Hz
Power factor	>0.99	>0.99	>0.99
THDI	<3%	<3%	<3%
AC aansluiting	Single phase	Single phase	Single phase

#### Efficiëntie

Max. Efficiëntie	96.5%	96.4%	96.3%
Euro-eta	95.5%	95.5%	95.5%
MPPT efficiëntie	99.5%	99.5%	99.5%

#### Beveiliging Componenten

DC polariteit beveiliging	yes	yes	yes
DC schakelaar voor elke MPPT	yes	yes	yes
Stroom beveiliging	yes	yes	yes
Vermogen over-voltage beveiliging	yes	yes	yes
Aarding monitoring	yes	yes	yes
Grid monitoring	yes	yes	yes
Geïntegreerde stroom-lekkage monitoring unit	yes	yes	yes

#### Algemene Informatie

Dimensions (W / H / D) in mm	440/455/135	440/455/135	440/455/135
Gewicht	18KG	18KG	18.5KG
Operationele temperatuur bereik	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C
Geluidsniveau	≤25 dB(A)	≤25 dB(A)	≤25 dB(A)
Self-Consumption night	< 0.5 W	< 0.5 W	< 0.5 W
Topologie	HF Transformer	HF Transformer	HF Transformer
Cooling concept	Natural	Natural	Natural
Beveiligingsgraad	IP 65	IP 65	IP 65
Hoogte	2000m without derating	2000m without derating	2000m without derating
Relatieve Vochtigheid	0~95%	0~95%	0~95%

#### Componenten

DC aansluiting	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC aansluiting	Screw terminal	Screw terminal	Screw terminal
Display	LCD	LCD	LCD
Interfaces: RS232/RS485/ Bluetooth/RF/Wi-Fi	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt
Garantie 5 jaar/10 jaar	yes / opt	yes / opt	yes / opt

#### Certificaten

CE, VDE 0126-1-1, VDE-AR-N4105, G83, RD1663, DK5940, IEC-62109, AS4777, AS/NZS 3100





## Three Phase Inverter

Growatt 4000UE / 5000UE / 6000UE

Growatt 7000UE / 8000UE / 9000UE

Growatt10000UE / 12000UE / 18000UE / 20000UE







## Growatt 4000UE / 5000UE / 6000UE

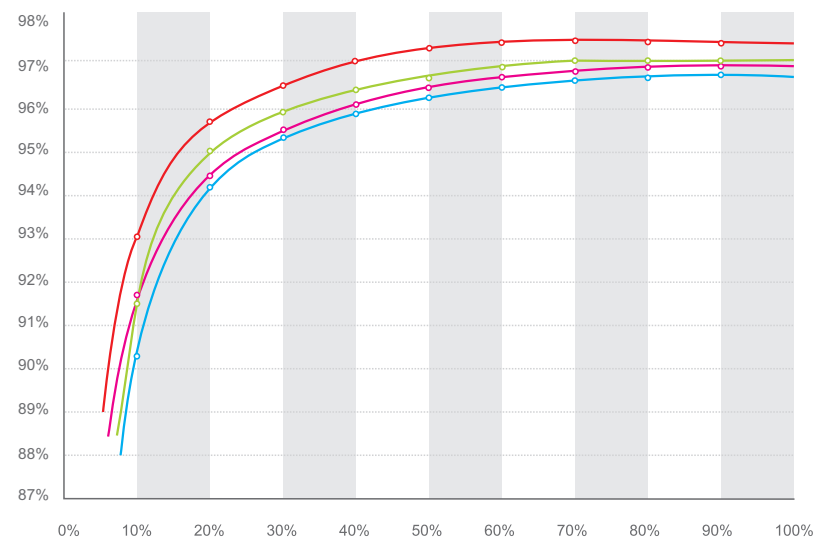
### Leading - edge Technology

- DC input voltage up to 800V
- Maximum efficiency of 97.9%
- Internal DC switch
- Transformerless
- Compact design
- Multi MPP controller
- Ethernet / RF technology / Wi-Fi
- 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.

### 6k efficiency



### Growatt 4000 UE

### Growatt 5000 UE

### Growatt 6000 UE

### Invoer Data

Max. DC power	4200W	5200W	6300W
Max. DC voltage	800V	800V	800V
Start voltage	150V	150V	150V
PV voltage bereik	140V - 800V	140V - 800V	140V - 800V
MPPT werk voltage bereik/nominaal bereik	200V - 800V / 580V	200V - 800V / 580V	200V - 800V / 580V
Max. DC voltage bereik	250V - 750V	300V - 750V	350V - 750V
Aantal MPP trackers/strings per MPP tracker	2/1	2/1	2/1
Max invoer stroom	9A / 9A	9A / 9A	10A / 10A
Max invoer per string	16A	16A	16A
<b>Output (AC)</b>			
Nominale AC-uitgangsstroom	4000W	5000W	6000W
Max. AC vermogen	4000VA	5000VA	6000VA
Max. uitgangsstroom	6.4A	7.9A	9.3A
AC nominaal voltage; range	3/N/PE, 230V/400V 185 - 260V	3/N/PE, 230V/400V 185 - 260V	3/N/PE, 230V/400V 185 - 260V
AC grid frequency ;range	50/60Hz; 44-55Hz/54-65Hz	50/60Hz; 44-55Hz/54-65Hz	50/60Hz; 44-55Hz/54-65Hz
Power factor	1	1	1
Displacement power factor configurable*	0.9 leading -0.9lagging	0.9 leading -0.9lagging	0.9 leading -0.9lagging
THDI	<3%	<3%	<3%
AC aansluiting	Three phase	Three phase	Three phase
<b>Efficiëntie</b>			
Max. Efficiëntie	97.1%	97.3%	97.5%
Euro-eta	96.5%	96.6%	96.8%
MPPT efficiëntie	99.5%	99.5%	99.5%
<b>Beveiliging Componenten</b>			
DC polariteit beveiliging	yes	yes	yes
DC schakelaar voor elke MPPT	yes	yes	yes
Stroom beveiliging	yes	yes	yes
Vermogen over-voltage beveiliging	yes	yes	yes
Aarding monitoring	yes	yes	yes
Grid monitoring	yes	yes	yes
Geïntegreerde stroom-lekkage monitoring unit	yes	yes	yes
<b>Algemene Informatie</b>			
Dimensions (W / H / D) in mm	560/433/200	560/433/200	560/433/200
Gewicht	30KG	35KG	35KG
Operationele temperatuur bereik	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C
Geluidsniveau	≤ 35 dB(A)	≤ 35 dB(A)	≤ 35 dB(A)
Self-Consumption night	< 0.5W	< 0.5W	< 0.5W
Topologie	Transformerless	Transformerless	Transformerless
Cooling concept	Natural	Natural	Natural
Beveiligingsgraad	IP 65	IP 65	IP 65
Hoogte	2000m without derating	2000m without derating	2000m without derating
Relatieve Vochtigheid	0~95%	0~95%	0~95%
<b>Componenten</b>			
DC aansluiting	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC aansluiting	Screw terminal	Screw terminal	Screw terminal
Display	LCD	LCD	LCD
Interfaces: RS232/RS485/Bluetooth/RF/Wi-Fi	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt
Garantie 5 jaar/10 jaar	yes / opt	yes / opt	yes / opt

CE, VDE0126-1-1, N4105, IEC 62109, C10/C11, EN61000-6-2, EN61000-6-3

\*0.95leading...0.95lagging with CEI 0-21 (System power less than 6KW)  
0.9leading...0.9lagging with CEI 0-21 (System power larger than 6KW)

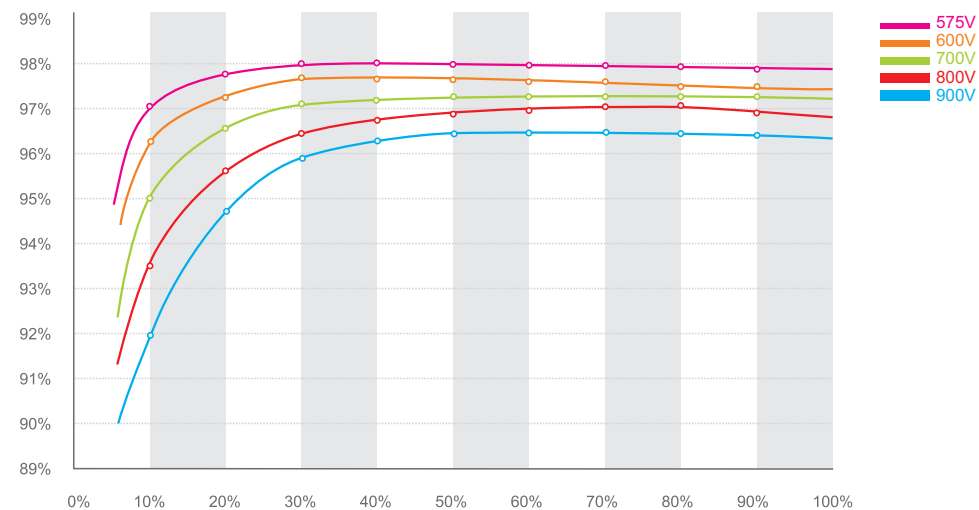


## Growatt 7000UE / 8000UE / 9000UE

### 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 / Wi-Fi
- Sound control
- Easy installation
- Comprehensive Growatt warranty program

9k efficiency



### Growatt 7000UE

### Growatt 8000UE

### Growatt 9000UE

#### Invoer Data

Max. DC power	7300W	8350W	9500W
Max. DC voltage	1000V	1000V	1000V
Start voltage	350V	350V	350V
PV voltage bereik	180V - 1000V	180V - 1000V	180V - 1000V
MPPT werk voltage bereik/nominaal bereik	300V - 1000V / 600V	300V - 1000V / 600V	300V - 1000V / 600V
Max. DC voltage bereik	400V-800V	400V-800V	400V-800V
Aantal MPP trackers/strings per MPP tracker	2/2	2/2	2/2
Max invoer stroom	15A / 15A	15A / 15A	15A / 15A
Max invoer per string	15A	15A	15A
<b>Output (AC)</b>			
Nominale AC-uitgangsstroom	7KW	8KW	9KW
Max. AC vermogen	7.0KVA	8.0KVA	9.0KVA
Max. uitgangsstroom	11.7A	13.3A	15A
AC nominaal voltage; range	3/N/PE, 230V/400V 184 - 275V	3/N/PE, 230V/400V 184 - 275V	3/N/PE, 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	1	1	1
Displacement power factor configurable*	0.8 leading -0.8lagging	0.8 leading -0.8lagging	0.8 leading -0.8lagging
THDI	<3%	<3%	<3%
AC aansluiting	Three phase	Three phase	Three phase
<b>Efficiëntie</b>			
Max. Efficiëntie	98%	98%	98%
Euro-eta	97.5%	97.5%	97.5%
MPPT efficiëntie	99.5%	99.5%	99.5%
<b>Beveiliging Componenten</b>			
DC polariteit beveiliging	yes	yes	yes
DC schakelaar voor elke MPPT	yes	yes	yes
Stroom beveiliging	yes	yes	yes
Vermogen over-voltage beveiliging	yes	yes	yes
Aarding monitoring	yes	yes	yes
Grid monitoring	yes	yes	yes
Geïntegreerde stroom-lekkage monitoring unit	yes	yes	yes
<b>Algemene Informatie</b>			
Dimensions (W / H / D) in mm	740/490/235	740/490/235	740/490/235
Gewicht	41kg/90.4lb	41kg/90.4lb	41kg/90.4lb
Operationele temperatuur bereik	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C
Geluidsniveau	≤ 55 dB(A)	≤ 55 dB(A)	≤ 55 dB(A)
Self-Consumption night	< 0.5W	< 0.5W	< 0.5W
Topologie	Transformerless	Transformerless	Transformerless
Cooling concept	Smart cooling	Smart cooling	Smart cooling
Beveiligingsgraad	IP 65	IP 65	IP 65
Hoogte	2000m without derating	2000m without derating	2000m without derating
Relatieve Vochtigheid	0~95%	0~95%	0~95%
<b>Componenten</b>			
DC aansluiting	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC aansluiting	Screw terminal	Screw terminal	Screw terminal
Display	LCD	LCD	LCD
Interfaces: RS232/RS485/Bluetooth/RF/Wi-Fi	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt
Garantie 5 jaar/10 jaar	yes / opt	yes / opt	yes / opt

VDE AR-N4105, CEI 0-21, CE, VDE 0126-1-1, IEC 62109, RD 1663/2000, G59/2, EN50438, AS4777, AS/NZS 3100

\*0.9leading...0.9lagging with VDE AR-N4105.  
0.9leading...0.9lagging with CEI 0-21 (System power larger than 6KW)



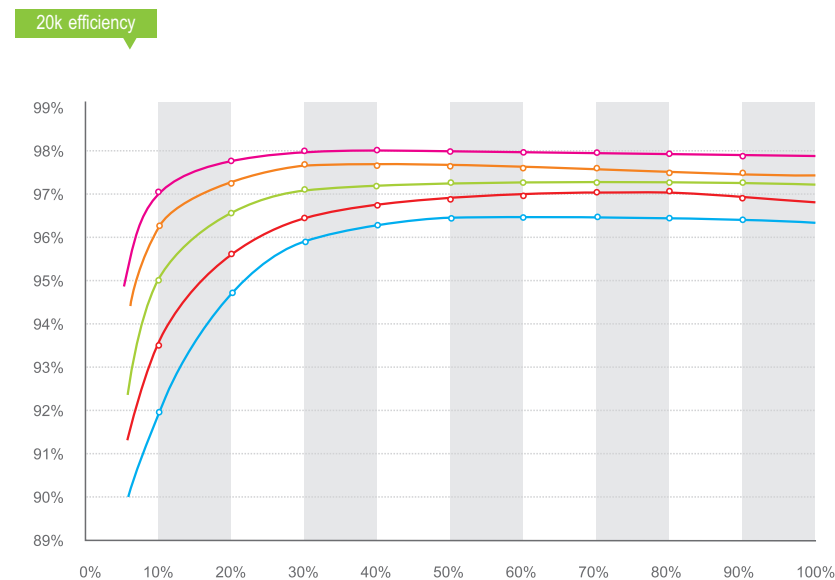
## Growatt 10000UE / 12000UE / 18000UE / 20000UE

### 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 / Wi-Fi
- 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.



	Growatt 10000UE	Growatt 12000UE	Growatt 18000UE	Growatt 20000UE
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### Invoer Data

Max. DC power	10500W	12500W	18700W	20800W
Max. DC voltage	1000V	1000V	1000V	1000V
Start voltage	350V	350V	350V	350V
PV voltage bereik	180V - 1000V	180V - 1000V	180V - 1000V	180V - 1000V
MPPT werk voltage bereik/nominaal bereik	300V - 1000V / 600V	300V - 1000V / 600V	300V - 1000V / 600V	300V - 1000V / 600V
Max. DC voltage bereik	400V - 800V	400V - 800V	400V - 800V	400V - 800V
Aantal MPP trackers/strings per MPP tracker	2/2	2/2	2/3	2/3
Max invoer stroom	15A / 15A	17A / 17A	23A / 23A	26A / 26A
Max invoer per string	20A	20A	20A	20A

### Output (AC)

Nominale AC-uitgangsstroom	10KW	12KW	18KW	20KW
Max. AC vermogen	10KVA	12KVA	18KVA	20KVA
Max. uitgangsstroom	16A	19A	28.6A	32A
AC nominaal voltage; range	3/N/PE, 230V/400V 184 - 275V	3/N/PE, 230V/400V 184 - 275V	3/N/PE, 230V/400V 184 - 275V	3/N/PE, 230V/400V 184 - 275V
AC grid frequency ;range	50/60Hz; 44-55Hz/54-65Hz	50/60Hz; 44-55Hz/54-65Hz	50/60Hz; 44-55Hz/54-65Hz	50/60Hz; 44-55Hz/54-65Hz
Power factor	1	1	1	1
Displacement power factor configurable*	0.8 leading -0.8lagging	0.8 leading -0.8lagging	0.8 leading -0.8lagging	0.8 leading -0.8lagging
THDI	<3%	<3%	<3%	<3%
AC aansluiting	Three phase	Three phase	Three phase	Three phase

### Efficiëntie

Max. Efficiëntie	98%	98%	98%	98%
Euro-eta	97.5%	97.5%	97.5%	97.5%
MPPT efficiëntie	99.5%	99.5%	99.5%	99.5%

### Beveiliging Componenten

DC polariteit beveiliging	yes	yes	yes	yes
DC schakelaar voor elke MPPT	yes	yes	yes	yes
Stroom beveiliging	yes	yes	yes	yes
Vermogen over-voltage beveiliging	yes	yes	yes	yes
Aarding monitoring	yes	yes	yes	yes
Grid monitoring	yes	yes	yes	yes
Geïntegreerde stroom-lekkage monitoring unit	yes	yes	yes	yes

### Algemene Informatie

Dimensions (W / H / D) in mm	740/490/235	740/490/235	740/570/235	740/570/235
Gewicht	41KG	41KG	60KG	60KG
Operationele temperatuur bereik	-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)
Geluidsniveau	≤ 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
Topologie	Transformerless	Transformerless	Transformerless	Transformerless
Cooling concept	Smart cooling	Smart cooling	Smart cooling	Smart cooling
Beveiligingsgraad	IP 65	IP 65	IP 65	IP 65
Hoogte	2000m without derating	2000m without derating	2000m without derating	2000m without derating
Relatieve Vochtigheid	0~95%	0~95%	0~95%	0~95%

### Componenten

DC aansluiting	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC aansluiting	Screw terminal	Screw terminal	Screw terminal	Screw terminal
Display	LCD	LCD	LCD	LCD
Interfaces: RS232/RS485/Bluetooth/RF/Wi-Fi	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt
Garantie 5 jaar/10 jaar	yes / opt	yes / opt	yes / opt	yes / opt

### Certificaten

VDE-AR-N4105, CEI 0-21, CE, VDE 0126-1-1, IEC 62109, RD 1663/2000, G59/2, EN50438, AS4777, AS/NZS 3100, MEA, PEA

\*0.9leading...0.9lagging with VDE AR-N4105.  
0.9leading...0.9lagging with CEI 0-21 (System power larger than 6KW)



## Monitoring System

Shine Server

Shine Wi-Fi

Shine Lan

Sine Phone

Shine Vision

Shine WebBox



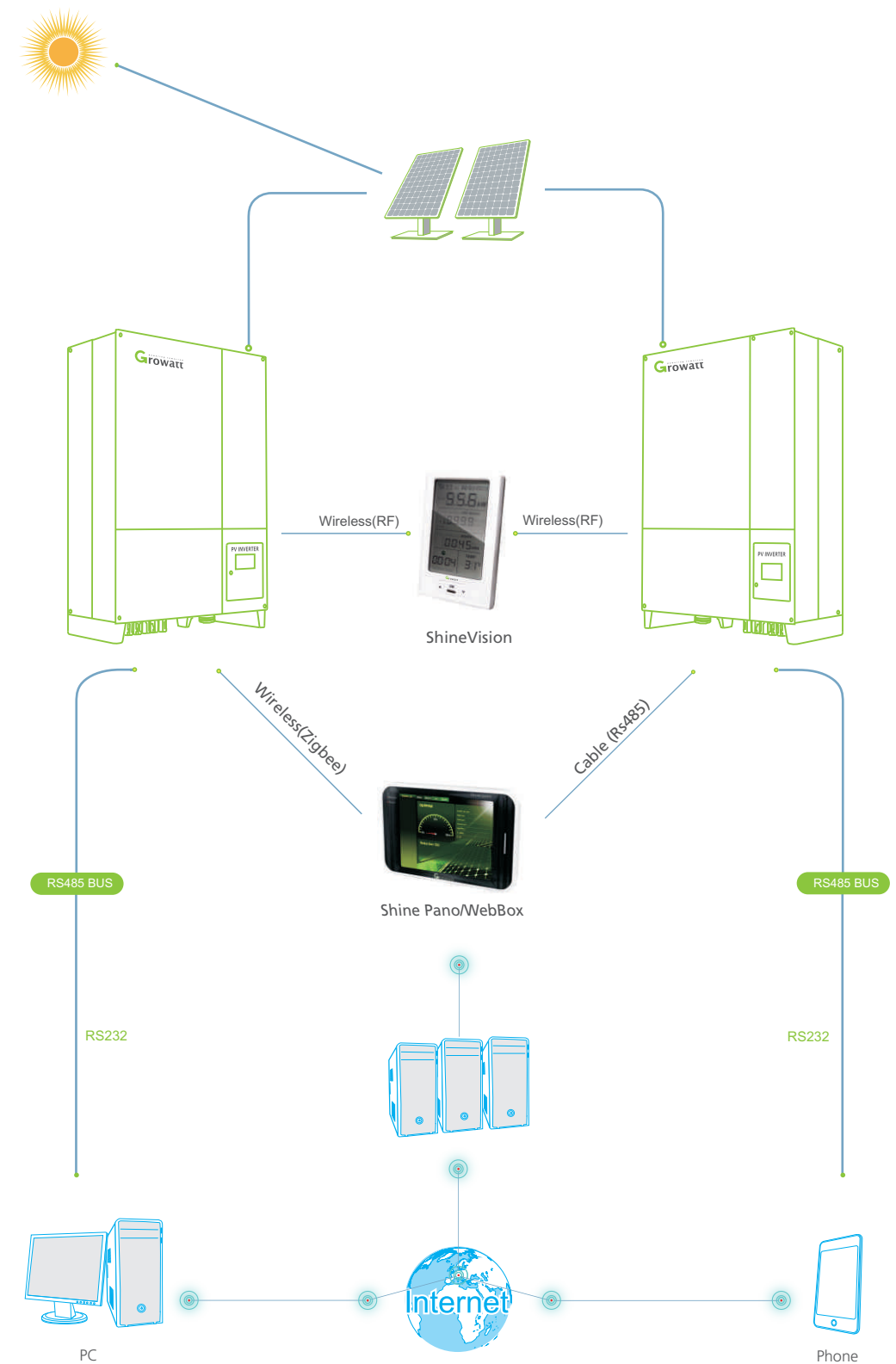


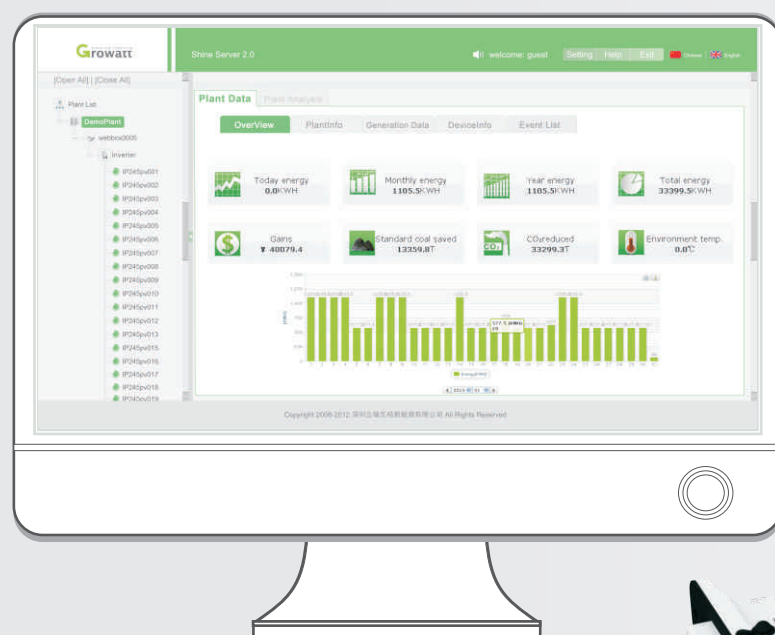


## Monitoring system

Het Growatt monitoring systeem is gediversifieerd en hooguit intelligent. Shine Vision en de Shine Pano geven PV eigenaren en beheerders een web-platform for real-time updates, onderhoud, en faciliteit management.

Door een sterke back-up van hardware en software, verschillende communicatie mogelijkheden en displays kunnen klanten makkelijk hun PV portfolio beheren.





## Shine Server

Het fundament van alle monitoring mogelijkheden wordt mogelijk gemaakt door de Shine Server. Met een flexibel design is de Shine Server een interactieve platform waar u onmiddellijk en gemakkelijk bij kunt wanneer u maar wilt.

### Features

- Gemakkelijk te gebruiken en onderhouden
- Volledig register van al uw PV systemen en hun status.
- Centraal beheer voor alle systemen.
- Professionele analyse en functies om zo uw systeem opbrengst te maximaliseren.
- Real-time toegang wereldwijd via uw PC, tablet, of telefoon.

## Shine Server

<b>Languages</b>	
Available languages	English, Chinese, French, Japanese
<b>System requirements</b>	
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、 Shine Pano、 Wi-Fi Module
<b>Access</b>	
Website	<a href="http://server.growatt.com">http://server.growatt.com</a>
<b>Plant information</b>	
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
<b>Plant management</b>	
Account	User could manage all PV plants with one same account
<b>Monitoring</b>	
Inverter status	All inverter running status are recorded automatically. The warning of fault is highlighted and immediate.
<b>Status reporting</b>	
Event reports	Timely e-mail reports on system fault and plant error.
<b>Background operating</b>	
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

## Datasheet

### Wi-Fi Module

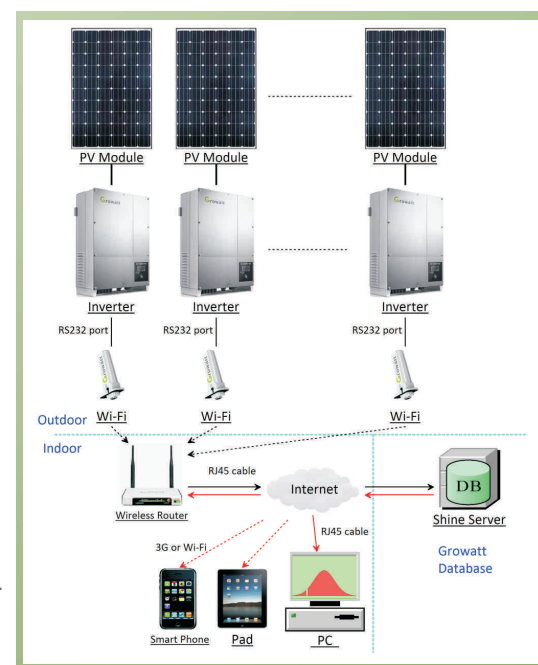
<b>Communication</b>	
Frequency range	2.412GHz-2.484GHz
<b>General data</b>	
Dimensions (W/H/D)	135/79/29mm
Weight	63g
Protection rating	IP 65
operating temperature range	-25°C ~ +55°C



## Shine Wi-Fi

Newly recommended for projectors and house-owners

- Professioneel monitoring via het Internet.
- Tot 100-meter draadloos bereik
- Easy-to-use
- Elke omvormer die u installeerd kunt u toevoegen aan uw eigen projectlijst.



### Wi-Fi Module

#### General Data

Dimensions(Length/Width/Height)	135mm/79mm/29mm
Weight	63g
Software language	English, Chinese

#### Wireless Parameters

Certification	FCC/CE
Wireless type	Wi-Fi
Wireless standard	802.11 b/g/n
Frequency range	2.412GHz ~ 2.484GHz
Antenna gain	2.5 dBi

#### Hardware Parameters

Data interface	UART : 9600bps Ethernet : 100Mbps
Operating voltage	9V(+/-5%)
Operating current	100mA ~ 300mA
Operating temperature	-25°C ~ +55°C
Storage temperature	-40°C ~ +125°C

#### Software Parameters

Security mechanisms	WEP/WPA-PSK/WPA2-PSK/WAPI
Encryption	WEP64/WEP128/TKIP/AES
WLAN default IP	192.168.10.100

#### Application Parameters

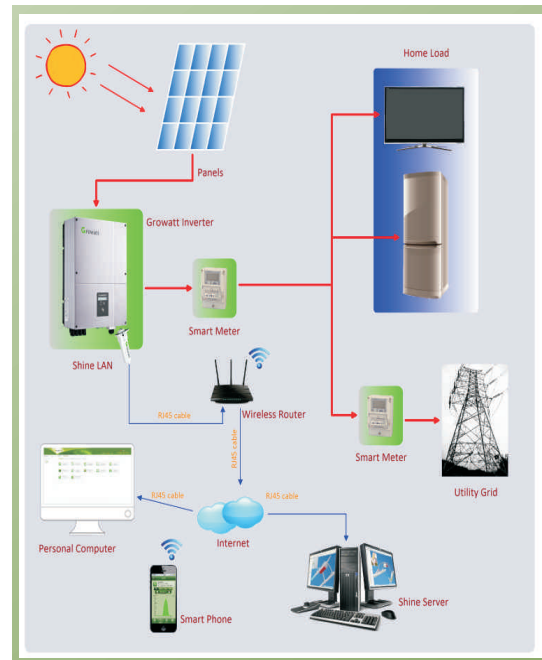
Supported servers	Shine Server
Inverter communication	RS232(Modbus RTU protocol)
Server communication	Wi-Fi via router(Modbus TCP protocol)
Supported routers	Wireless router(Include 3G router)
User configuration interface	Integrated web server(Internet browser)
Max.communication range	100m
Data transfer interval	5 Minutes
Default server URL	server.growatt.com



# Shine Lan

Newly recommended for projectors and house-owners

- Professioneel monitoring via het Internet.
- Easy-to-use
- Elke omvormer die u installeert kunt u toevoegen aan uw eigen projectlijst.



## Shine Lan

### General Data

Dimensions(Length/Width/Height)	144mm/80mm/38mm
Weight	100g
Software language	English, Chinese
Language of the manual	English, Chinese
Certification	FCC/CE

### Wireless Parameters

Wireless type	Wi-Fi
Wireless standard	802.11 b/g/n
Frequency range	2.412GHz ~ 2.484GHz
Antenna gain	2.5 dBi
Security mechanisms	EP/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	RS-232, RJ-45
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°C ~ +55°C
Storage temperature	-30°C ~ +60°C

### 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	RJ-45 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





# ShinePhone

Download **ShinePhone**

For iOS



For Android



## ShinePhone

### General Data

Available languages	English, Chinese, Japanese
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
Deployment options	Desktop device



## Shine Vision

De all-in-one draadloos monitoring systeem voor thuis.

Informatief, leuk, en gemakkelijk te installeren; de ShineVision met Radio Frequency heeft niet alleen een sexy design maar is ook meteen een innovatieve monitoring oplossing voor uw PV systeem. Belangrijke informatie is af te lezen op uw display inclusief dagelijkse, maandelijkse en totale opbrengst. Ook het totale vermogen, uw besparingen, de AC en DC voltages, en uw energie opbrengst in Euros, US

### Features

- RF communicatie for draadloze verbinding
- Monitoring t/m zes omvormers tegelijk.
- Simple installation. It can be placed anywhere indoor with signal coverage.
- Simpele installatie en gemakkelijk te gebruiken met meerdere informatie af te lezen op het display.
- Automatisch archief en goede beveiliging.
- Audio alarm in the event of errors.
- Low power consumption, powered by adaptor or battery.

### Shine Vision

<b>Communication</b>	
Inverter communication	Wireless radio frequency
Number of inverters	Max.6 units
Communication range	
Partition communication	Max.30m
<b>Power supply</b>	
Power adapter	Input : 100-240V, 50/60Hz AC Output: 5V/0.1AAC
Type of battery	Number 5 AA alkaline battery
<b>Environmental conditions for operation</b>	
Emitter temperature	-10°C ~ 60°C
Monitor temperature	-10 °C ~ 50°C
Humidity range	≤80%
Protection rating	IP20
<b>General Data</b>	
Dimensions (W / H / D)	217/150/72mm
Weight	0.82kg
Installation site	Indoor
Deployment options	Desktop device
Language versions	English
<b>Features</b>	
Display	LCD display
Operation	key-press
Warranty	13 months
<b>Information displayed</b>	
General Information	Time, date, temperature
System Data	AC voltage, PV voltage, daily yield, monthly yield, total yield, etc.



## Shine WebBox

Is een kosteffectieve en compact monitor systeem special gericht voor solar power plants. Gebruikt een stabiel Linux operatie systeem met high-speed CPU, en slimme opname van uw systeemskwaliteiten. Locale opslag, gemakkelijk en draadloos met TCP/IP configuratie.

### Features:

- Multi-functieel en prestatie gerichte data logger;
- Informeerd u van de status wanneer u maar wilt.
- Opslag van data en flexibele opties, zoals systeem informatie management, en onderhoud benodigdheden.
- Data en informatie van het internet direct naar het Growatt Shine Server platform

### Shine WebBox

#### Communication

Communication with inverters	RS 485 ( Wire connection ) ZigBee ( Wireless connection )
Communication with PC	10/100 Mbit Ethernet
Communication range	RS 485: 1200m ZigBee: 300m (without obstacle) Ethernet: 100m

#### Electrical Data

Power adapter	Input: 100 ~ 240V,50/60Hz AC Output: 5V,2A DC
Power consumption	2.5W

#### Environmental Conditions

Ambient temperature	0 - 45°C
Relative air humidity	5%-95%

#### General Data

Dimensions(W/H/D)	185/125/30mm
Net weight	0.42kg
Mounting location	Indoor
Mounting type	Wall mounting , tabletop device
Status indicator	LED
Language	English
Data update frequency	5 minutes