



Official website



Company Wechat



Goodwe Quality, Good Value, Good Service, GoodWe!



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Hybrid System



Photovoltaic Inverter 1.0-75kW Series

GOODWE COMPANY PROFILE

GoodWe (Jiangsu) Power Supply Technology Co., Ltd. is a strategic emerging enterprise funded by world renowned electronics industry JXT Group with \$20 million capital; it is funded in part by the Chinese government. JXT Group is one of the largest Chinese manufacturers for electronic connector and a significant supplier of Apple and Samsung mobile devices.

It is firmly believed that technology innovation is GoodWe's core competence. With one hundred R&D staff, it offers a full-range of products for residential and commercial systems and secures a stable performance of all products. We have already developed and produced NS, D-NS, SDT, DT, ES, BP, Hybrid System seven series solar products, ranging from 1.0 to 65kW. Also, rich monitoring components completed by wireless and internet monitoring solutions have been provided in order to meet diverse demands of customers. In 2012, GoodWe R&D centre was listed as the key laboratory for grid-connected PV inverter and the talent training base by the Chinese government.

Since its foundation, under the philosophy of 4G---Good Quality, Good Service, Good Value and GoodWe, GoodWe staff continuously bring good products and service as well as good value to global customers. GoodWe solar inverter models of GW4000-SS and GW17K-DT both have achieved "Double A" in PHOTON test. This has led to GoodWe single-phase inverter ranking TOP3 and three-phase inverter ranking TOP5 in the world.

GoodWe has set up an integrated service system for pre-sale, in-sale and after-sale and has established service centres worldwide. The company is devoted to creating a concept of "workshop" which aims to offer global support to all customers including project consulting, technical training, site instruction and after-sale tracking.

GoodWe solar inverters have been largely sold and installed in Germany, Australia, Denmark, the Netherlands and the UK and other locations. The quality and service of GoodWe solar inverters are highly spoken of by its customers worldwide.

In 2012, GoodWe received "The Best Employer" award by the Chinese government.

In 2013, GoodWe was awarded the High-Tech Enterprise of Jiangsu Province.

In 2014, GoodWe became Jiangsu Renewable Energy Engineering Technology Research Center of On-Grid Inverters.

Core Features

Highly insist on product quality

- Each component comes from industry-leading suppliers
- Each product passes ATS test strictly
- Each product has a report with 10 key performance indexes

Smart design and precise workmanship

- Global internet monitoring system
- 30% lighter compared with similar products

World-class product performance

- 1-5kW products conversion efficiency up to 97.8%
- 9-25kW products conversion efficiency up to 98.2%
- All products' MPPT efficiency up to 99.5%
- Products' THDi less than 1% (SS)

High safety and reliability

- Up to 13 safety measurements
- IP65 anti-dust and water-proof applied
- DC switch
- World-wide certificates (VDE0126-1-1, VDE-AR--N 4105, CE, SAA, G83/2, G59/3, EN50438, CGC, CQC, MEA, PEA...)



江苏固德威电源科技股份有限公司
JIANGSU GOODWE POWER SUPPLY TECHNOLOGY CO., LTD.



NS Series (Single-MPPT, Single-Phase)

GoodWe NS series inverter adopts cutting-edge technology in photovoltaic fields, designed under modern industrial concept. Inheriting all the excellent traits from GoodWe SS and DS series, the NS series is much smarter in size and weight. It makes the series convenient for transport and suitable for different installation environments. Comprehensive MPPT technology, software and hardware technology is guaranteed to maximize the life-span of these inverters.

- Up to 10 safety measurements

■ DC switch

■ IP65 dust-proof and water-proof

■ 45°C full-load output
- Lower start-up voltage at 80V

■ Wide range of MPPT voltage

■ Wireless monitoring and communication

■ Fanless low-noise design
- 30% lighter than similar products

■ 20% Volume optimization

■ Perfect for 3-panel system

Technical Data	GW1000-NS	GW1500-NS	GW2000-NS	GW2500-NS	GW3000-NS
DC Input Data					
Max. allowed PV Power [W]	1300	1950	2600	3250	3900
Nominal DC Power [W]	1200	1800	2300	2700	3200
Max. DC voltage [V]	450	450	450	500	500
MPPT voltage range [V]	80~400	80~400	80~400	80~450	80~450
Starting voltage [V]	80	80	80	80	80
Max. DC current [A]	10	10	10	18	18
No. of DC connectors	1	1	1	1	1
No. of MPPTs	1	1	1	1	1
DC connector	MC4/ Phoenix/ Amphenol			MC4/ Phoenix/ Amphenol	
AC Output Data					
Norminal AC power [W]	1000	1500	2000	2500	3000
Max. AC power [W]	1000	1500	2000	2500	3000
Max. AC current [A]	5	7.5	10	12.5	13.5
Norminal AC output	50/60Hz; 230Vac			50/60Hz; 230Vac	
AC output range	45~55Hz/55~65Hz; 180~270Vac			45~55Hz/55~65Hz; 180~270Vac	
THDi	<3%			<3%	
Power factor	0.8 leading~0.8 lagging			0.8 leading~0.8 lagging	
Grid connection	Single phase	Single phase	Single phase	Single phase	Single phase
Efficiency					
Max. efficiency	96.5%	97.0%	97.0%	97.5%	97.5%
Euro efficiency	>96.0%	>96.0%	>96.0%	>97.0%	>97.0%
MPPT adaptation efficiency	99.9%	99.9%	99.9%	99.9%	99.9%
Protection					
Residual current monitoring unit	Integrated			Integrated	
Anti-islanding protection	Integrated			Integrated	
DC switch	Integrated (optional)			Integrated (optional)	
AC over current protection	Integrated			Integrated	
Insulation monitoring	Integrated			Integrated	
Certifications & Standards					
Grid regulation	G83/2, VDE0126-1-1, AS4777.2&3, EN50438, ERDF-NOI-RES_13E;			G83/2, VDE0126-1-1, AS4777.2&3, EN50438, ERDF-NOI-RES_13E;	
Safety	According to IEC62109-1&-2, AS3100			According to IEC62109-1&-2, AS3100	
EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 61000-3-2, EN 61000-3-3			EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 61000-3-2, EN 61000-3-3	
General Data					
Dimensions (WxHxD) [mm]	344*274.5*128			344*274.5*128	
Weight [kg]	7.5			8.5	
Mounting	Wall bracket			Wall bracket	
Ambient temperature range	-25~60°C (> 45°C derating)			-25~60°C (> 45°C derating)	
Relative humidity	0~95%			0~95%	
Max. operating altitude	4000m(> 3000m derating)			4000m(> 3000m derating)	
Protection degree	IP65			IP65	
Topology	Transformerless			Transformerless	
Night power consumption [W]	<1			<1	
Cooling	Natural convection			Natural convection	
Noise emission [dB]	<25			<25	
Display	LCD			LCD	
Communication	USB2.0; WiFi or RS485			USB2.0; WiFi or RS485	
Standard warranty [years]	5/10/15/20/25 (optional)			5/10/15/20/25 (optional)	

Color Options



NS Series (Single-MPPT, Single-Phase)

GoodWe NS series inverter adopts cutting-edge technology in photovoltaic fields, designed under modern industrial concept. Inheriting all the excellent traits from GoodWe SS and DS series, the NS series is much smarter in size and weight. It makes the series convenient for transport and suitable for different installation environments. Comprehensive MPPT technology, software and hardware technology is guaranteed to maximize the life-span of these inverters.

- Up to 10 safety measurements
 - DC switch
 - IP65 dust-proof and water-proof
 - 45°C full-load output
- Built-in anti-reverse function
 - 30% lighter than similar products
 - 20% Volume optimization
 - Wide range of MPPT voltage
- Multiple monitoring and communication
 - Fanless low-noise design

Technical Data	GW3600-NS	GW4200-NS	GW5000-NS
DC Input Data			
Max. allowed PV Power [W]	4680	5460	6500
Nominal DC Power [W]	3960	4600	5500
Max. DC voltage [V]	580	580	580
MPPT voltage range [V]	125~550	125~550	125~550
Starting voltage [V]	120	120	120
Max. DC current [A]	22	22	22
No. of DC connectors	2	2	2
No. of MPPTs	1	1	1
DC connector	MC4/ Phoenix/ Amphenol	MC4/ Phoenix/ Amphenol	MC4/ Phoenix/ Amphenol
AC Output Data			
Normal AC power [W]	3680	4200	5000*
Max. AC power [W]	3680	4200	5000*
Max. AC current [A]	16	19	22.8
Normal AC output	50/60Hz; 230Vac	50/60Hz; 230Vac	50/60Hz; 230Vac
AC output range	45~55Hz/55~65Hz; 180~270Vac	45~55Hz/55~65Hz; 180~270Vac	45~55Hz/55~65Hz; 180~270Vac
THDi	<3%	<3%	<3%
Power factor	0.8 leading~0.8 lagging	0.8 leading~0.8 lagging	0.8 leading~0.8 lagging
Grid connection	Single phase	Single phase	Single phase
Efficiency			
Max. efficiency	97.8%	97.8%	97.8%
Euro efficiency	>97.5%	>97.5%	>97.5%
MPPT adaptation efficiency	99.9%	99.9%	99.9%
Protection			
Residual current monitoring unit	Integrated	Integrated	Integrated
Anti-islanding protection	Integrated	Integrated	Integrated
DC switch	Integrated (optional)	Integrated (optional)	Integrated (optional)
AC over current protection	Integrated	Integrated	Integrated
Insulation monitoring	Integrated	Integrated	Integrated
Certifications & Standards			
Grid regulation	VDE-AR-N 4105, AS4777.2&.3, G59/3, VDE0126-1-1, EN50438, ERDF-NOI-RES_13E;	VDE-AR-N 4105, AS4777.2&.3, G59/3, VDE0126-1-1, EN50438, ERDF-NOI-RES_13E;	VDE-AR-N 4105, AS4777.2&.3, G59/3, VDE0126-1-1, EN50438, ERDF-NOI-RES_13E, MEA, PEA;
Safety	IEC62109-1&-2, AS3100	IEC62109-1&-2, AS3100	IEC62109-1&-2
EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 61000-3-11, EN 61000-3-12		
General Data			
Dimensions (WxHxD) [mm]	347*432*145	347*432*145	347*432*145
Weight [kg]	14	14	14
Mounting	Wall bracket	Wall bracket	Wall bracket
Ambient temperature range	-25~60°C (>45°C derating)	-25~60°C (>45°C derating)	-25~60°C (>45°C derating)
Relative humidity	0~95%	0~95%	0~95%
Max. operating altitude	4000m(> 3000m derating)	4000m(> 3000m derating)	4000m(> 3000m derating)
Protection degree	IP65	IP65	IP65
Topology	Transformerless	Transformerless	Transformerless
Night power consumption [W]	<1	<1	<1
Cooling	Natural convection	Natural convection	Natural convection
Noise emission [dB]	<25	<25	<25
Display	LCD	LCD	LCD
Communication	USB2.0; RS485 or WiFi	USB2.0; RS485 or WiFi	USB2.0; RS485 or WiFi
Standard warranty [years]	5/10/15/20/25 (optional)	5/10/15/20/25 (optional)	5/10/15/20/25 (optional)

*Note: 4600W for VDE-AR-N4105

Color Options



D-NS Series (Dual-MPPT, Single-Phase)

GoodWe D-NS series inverter adopts cutting-edge technology in photovoltaic fields, designed under modern industrial concept. Inheriting all the excellent traits from GoodWe SS and DS series, the D-NS series is much smarter in size and weight. Excellent cooling design, comprehensive software and hardware technology is guaranteed to maximize the life-span of these inverters.

- Up to 10 safety measurements
 - DC switch
 - IP65 dust-proof and water-proof
 - 45°C full-load output
- Built-in anti-reverse function
 - 30% lighter than similar products
 - 20% Volume optimization
 - Wide range of MPPT voltage
- Multiple monitoring and communication
 - Fanless low-noise design

Technical Data

Technical Data	GW3000D-NS	GW3600D-NS	GW4200D-NS	GW5000D-NS
DC Input Data				
Max. allowed PV Power [W]	3900	4680	5460	6500
Nominal DC Power [W]	3300	3960	4600	5500
Max. DC voltage [V]	580	580	580	580
MPPT voltage range [V]	80~550	125~550	125~550	125~550
Starting voltage [V]	120	120	120	120
Max. DC current [A]	11/11	11/11	11/11	11/11
No. of DC connectors	2	2	2	2
No. of MPPTs	2 (can parallel)	2 (can parallel)	2 (can parallel)	2 (can parallel)
DC connector	MC4/ Phoenix/ Amphenol	MC4/ Phoenix/ Amphenol	MC4/ Phoenix/ Amphenol	MC4/ Phoenix/ Amphenol
AC Output Data				
Normal AC power [W]	3000	3680	4200	5000*
Max. AC power [W]	3000	3680	4200	5000*
Max. AC current [A]	13.6	16	19	22.8
Normal AC output	50/60Hz; 230Vac		50/60Hz; 230Vac	
AC output range	45~55Hz/55~65Hz; 180~270Vac		45~55Hz/55~65Hz; 180~270Vac	
THDi	<3%		<3%	
Power factor	0.8 leading~0.8 lagging		0.8 leading~0.8 lagging	
Grid connection	Single phase		Single phase	
Efficiency				
Max. efficiency	97.8%	97.8%	97.8%	97.8%
Euro efficiency	>97.5%	>97.5%	>97.5%	>97.5%
MPPT adaptation efficiency	99.9%	99.9%	99.9%	99.9%
Protection				
Residual current monitoring unit	Integrated	Integrated	Integrated	Integrated
Anti-islanding protection	Integrated	Integrated	Integrated	Integrated
DC switch	Integrated (optional)	Integrated (optional)	Integrated (optional)	Integrated (optional)
AC over current protection	Integrated	Integrated	Integrated	Integrated
Insulation monitoring	Integrated	Integrated	Integrated	Integrated
Certifications & Standards				
Grid regulation	VDE-AR-N 4105, EN50438, VDE0126-1-1, AS4777.2&.3, G83/G59	VDE-AR-N 4105, G83/G59, VDE0126-1-1, EN50438, AS4777.2&.3, MEA,PEA	VDE-AR-N 4105, EN50438, VDE0126-1-1, G83/G59	VDE-AR-N 4105, EN50438, VDE0126-1-1, G83/G59, AS4777.2&.3 , MEA, PEA
Safety	IEC62109-1&-2, AS3100			
EMC	IEC/EN 61000-6-1,IEC/EN 61000-6-2,IEC/EN 61000-6-3,IEC/EN 61000-6-4,IEC/EN 61000-3-11, IEC/EN 61000-3-12			
General Data				
Dimensions (WxHxD) [mm]	347*432*145	347*432*145	347*432*145	347*432*145
Weight [kg]	14	14	14	14
Mounting	Wall bracket	Wall bracket	Wall bracket	Wall bracket
Ambient temperature range	-25~60℃ (>45℃ derating)	-25~60℃ (>45℃ derating)	-25~60℃ (>45℃ derating)	-25~60℃ (>45℃ derating)
Relative humidity	0~95%	0~95%	0~95%	0~95%
Max. operating altitude	4000m(> 3000m derating)	4000m(> 3000m derating)	4000m(> 3000m derating)	4000m(> 3000m derating)
Protection degree	IP65	IP65	IP65	IP65
Topology	Transformerless	Transformerless	Transformerless	Transformerless
Night power consumption [W]	<1	<1	<1	<1
Cooling	Natural convection	Natural convection	Natural convection	Natural convection
Noise emision [dB]	<25	<25	<25	<25
Display	LCD	LCD	LCD	LCD
Communication	USB2.0; RS485 or WiFi	USB2.0; RS485 or WiFi	USB2.0; RS485 or WiFi	USB2.0; RS485 or WiFi
Standard warranty [years]	5/10/15/20/25 (optional)	5/10/15/20/25 (optional)	5/10/15/20/25 (optional)	5/10/15/20/25 (optional)

*Note: 4600W for VDE-AR-N4105

☐ ☒ Color Options



Smart DT Series (Dual-MPPT, Three-Phase)

GoodWe smart DT series inverter is typically designed for the home solar systems, covering 4kW/5kW/6kW.By adopting cutting-edge technology of photovoltaic field, it provides three phase AC output, making home system connection well balanced , safer and more convenient. The integrated two MPPTs allow two-array inputs from different roof orientations. And the combination of both RS485 and Wi-Fi communication makes the system well interactive and extremely easy to monitor.

- Maximum Efficiency up to 97.8%
 - European Efficiency up to 96.7%
 - MPPT Efficiency up to 99.9%
- DC switch
 - IP65 dust-proof and water-proof
 - 45°C full-load output
- Super large 5-inch LCD
 - Lighter than similar products
 - Multiple monitoring and communication
 - Up to 80 pieces can be integrated in one system

Technical Data	GW4000-DT	GW5000-DT	GW6000-DT	GW8000-DT*	GW9000-DT*	GW10KN-DT*
DC Input Data						
Max. allowed PV Power [W]	5200	6500	7800	9600	10800	12000
Nominal DC Power [W]	4200	5200	6200	8300	9400	10500
Max. DC voltage [V]	1000	1000	1000	1000	1000	1000
MPPT voltage range [V]	200~800	200~800	200~800	200~850	200~850	200~850
Starting voltage [V]	180	180	180	180	180	180
Max. DC current [A]	11/11	11/11	11/11	11/11	11/11	11/11
No. of DC connectors	2	2	2	2	2	2
No. of MPPTs	2 (can parallel)			2 (can parallel)		
DC connector	MC4/ Phoenix/ Amphenol			MC4/ Phoenix/ Amphenol		
AC Output Data						
Normal AC power [W]	4000	5000	6000	8000	9000	10000
Max. AC power [W]	4000	5000	6000	8000	9000	10000
Max. AC current [A]	7	8.5	10	12.1	13.6	15.2
Normal AC output	50/60Hz; 400Vac			50/60Hz; 400Vac		
AC output range	45~55Hz/55~65Hz; 310~480Vac			45~55Hz/55~65Hz; 310~480Vac		
THDi	<1.5%			<2%		
Power factor	0.8 leading~0.8 lagging			0.80leading...0.80lagging		
Grid connection	3W/N/PE			3W/N/PE		
Efficiency						
Max. efficiency	98%	98%	98%	98.3%	98.3%	98.3%
Euro efficiency	>97.5%	>97.5%	>97.5%	>98.0%	>98.0%	>98.0%
MPPT adaptation efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
Protection						
Residual current monitoring unit	Integrated			Integrated		
Anti-islanding protection	Integrated			Integrated		
DC switch	Integrated (optional)			Integrated(optional)		
AC over current protection	Integrated			Integrated		
Insulation monitoring	Integrated			Integrated		
Certifications & Standards						
Grid regulation	VDE-AR-N 4105, AS4777.2, ERDF-NOI-RES_13E;VDE0126-1-1, EN50438 ,G83/2					
Safety	IEC62109-1&-2					
EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 61000-3-2, EN 61000-3-3					
General Data						
Dimensions (WxHxD) [mm]	516*474*192			516*474*192		
Weight [kg]	24			24		
Mounting	Wall bracket			Wall bracket		
Ambient temperature range	-25~60°C (>45°C derating)			-25~60°C (>45°C derating)		
Relative humidity	0~95%			0~95%		
Max. operating altitude	4000m(> 3000m derating)			4000m(> 3000m derating)		
Protection degree	IP65			IP65		
Topology	Transformerless			Transformerless		
Night power consumption [W]	<1			<1		
Cooling	Natural convection			Natural convection		
Noise emission [dB]	<30			<30		
Display	5.0" LCD			5.0" LCD		
Communication	USB2.0; RS485 or WiFi			USB2.0; RS485 or WiFi		
Standard warranty [years]	5/10/15/20/25 (optional)			5/10/15/20/25 (optional)		

*Available in Q2



Smart DT Series (Australia)

GoodWe smart DT series inverter is typically designed for the home solar systems, covering 4KW/5KW/6KW. By adopting cutting-edge technology of photovoltaic field, it provides three phase AC output, making home system connection well balanced, safer and more convenient. The integrated two MPPTs allow two-array inputs from different roof orientations. And the combination of both RS485 and Wi-Fi communication makes the system well interactive and extremely easy to monitor.

- Maximum Efficiency up to 96.8%

■ European Efficiency up to 96.7%

■ MPPT Efficiency up to 99.9%
- IP65 dust-proof and water-proof

■ 45°C full-load output
- Lighter than similar products

■ Multiple monitoring and communication

■ Up to 80 pieces can be integrated in one system

Technical Data	GW4000L-DT	GW5000L-DT	GW6000L-DT
DC Input Data			
Max. allowed PV Power [W]	5200	6500	7800
Nominal DC Power [W]	4200	5200	6200
Max. DC voltage [V]	600	600	600
MPPT voltage range [V]	200~550	200~550	200~550
Starting voltage [V]	180	180	180
Max. DC current [A]	11/11	11/11	11/11
No. of DC connectors	2	2	2
No. of MPPTs	2 (can parallel)	2 (can parallel)	2 (can parallel)
DC connector	MC4/ Phoenix/ Amphenol	MC4/ Phoenix/ Amphenol	MC4/ Phoenix/ Amphenol
AC Output Data			
Normal AC power [W]	4000	5000	6000
Max. AC power [W]	4000	5000	6000
Max. AC current [A]	7	8.5	10
Normal AC output	50/60Hz; 400Vac	50/60Hz; 400Vac	50/60Hz; 400Vac
AC output range	45~55Hz/55~65Hz; 310~480Vac	45~55Hz/55~65Hz; 310~480Vac	45~55Hz/55~65Hz; 310~480Vac
THDi	<1.5%	<1.5%	<1.5%
Power factor	0.8 leading~0.8 lagging	0.8 leading~0.8 lagging	0.8 leading~0.8 lagging
Grid connection	3W/N/PE	3W/N/PE	3W/N/PE
Efficiency			
Max. efficiency	96.8%	96.8%	96.8%
Euro efficiency	>95.5%	>95.5%	>95.5%
MPPT adaptation efficiency	99.9%	99.9%	99.9%
Protection			
Residual current monitoring unit	Integrated	Integrated	Integrated
Anti-islanding protection	Integrated	Integrated	Integrated
DC switch	Integrated (optional)	Integrated (optional)	Integrated (optional)
AC over current protection	Integrated	Integrated	Integrated
Insulation monitoring	Integrated	Integrated	Integrated
Certifications&Standards			
Grid regulation	AS4777.2/3, G83/2, EN50438	AS4777.2/3, G83/2, EN50438	AS4777.2/3, G83/2, EN50438
Safety	IEC62109-1&-2, AS3100	IEC62109-1&-2, AS3100	IEC62109-1&-2, AS3100
EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 61000-3-2, EN 61000-3-3		
General Data			
Dimensions (WxHxD) [mm]	516*474*192	516*474*192	516*474*192
Weight [kg]	24	24	24
Mounting	Wall bracket	Wall bracket	Wall bracket
Ambient temperature range	-25~60°C (>45°C derating)	-25~60°C (>45°C derating)	-25~60°C (>45°C derating)
Relative humidity	0~95%	0~95%	0~95%
Max. operating altitude	4000m(> 3000m derating)	4000m(> 3000m derating)	4000m(> 3000m derating)
Protection degree	IP65	IP65	IP65
Topology	Transformerless	Transformerless	Transformerless
Night power consumption [W]	<1	<1	<1
Cooling	Natural convection	Natural convection	Natural convection
Noise emission [dB]	<30	<30	<30
Display	5.0" LCD	5.0" LCD	5.0" LCD
Communication	USB2.0; RS485 or WiFi	USB2.0; RS485 or WiFi	USB2.0; RS485 or WiFi
Standard warranty [years]	5/10/15/20/25 (optional)	5/10/15/20/25 (optional)	5/10/15/20/25 (optional)



DT Series (Dual-MPPT, Three-Phase)

GoodWe DT series inverter adopts cutting-edge technology in photovoltaic fields. Higher conversion efficiency and lower energy losses are guaranteed to maximize customer satisfaction. With its reliable power grid support management and high protective class, the DT series is compatible with different types of branded solar panels and is also ideal for commercial rooftop systems. This safe and reliable series is the first choice for residential, commercial installations and power plants.

- Maximum Efficiency up to 98.5%

■ European Efficiency up to 98.1%

■ MPPT Efficiency up to 99.9%
- DC switch

■ IP65 dust-proof and water-proof rating

■ 45°C full-load output
- Super large 5-inch LCD

■ 30% lighter than similar products

■ Multiple monitoring and communication

■ up to 80 pieces can be integrated in one system

Technical Data	GW09K-DT	GW10K-DT	GW12K-DT	GW15K-DT	GW17K-DT	GW20K-DT	GW25K-DT
DC Input Data							
Max. allowed PV Power [W]	11700	13000	15600	19500	22100	26000	32500
Nominal DC Power [W]	9200	10200	12300	15400	17500	20500	25800
Max. DC voltage [V]	1000	1000	1000	1000	1000	1000	1000
MPPT voltage range [V]	260~850	260~850	260~850	260~850	260~850	260~850	260~850
Starting voltage [V]	250	250	250	250	250	250	250
Max. DC current [A]	22/11	22/11	22/11	22/22	22/22	22/22	27/27
No. of DC connectors	3	3	3	4	4	4	6
No. of MPPTs	2	2	2	2 (can parallel)	2 (can parallel)	2 (can parallel)	2 (can parallel)
DC connector	MC4/ Phoenix/ Amphenol						
AC Output Data							
Norminal AC power [W]	9000	10000	12000	15000	17000	20000	25000
Max. AC power [W]	9000	10000	12000	15000	17000	20000	25000
Max. AC current [A]	15	17	19	25	25	30	37
Norminal AC output	50/60Hz; 400Vac						
AC output range	45~55Hz/55~65Hz; 310~480Vac						
THDi	<1.5%						
Power factor	0.8 leading~0.8 lagging						
Grid connection	3W/N/PE						
Efficiency							
Max. efficiency	98.0%	98.0%	98.0%	98.2%	98.2%	98.4%	98.4%
Euro efficiency	>97.7%	>97.7%	>97.7%	>97.7%	>97.7%	>98.1%	>98.1%
MPPT adaptation efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
Protection							
Residual current monitoring unit	Integrated						
Anti-islanding protection	Integrated						
DC switch	Integrated (optional)						
AC over current protection	Integrated						
Insulation monitoring	Integrated						
Certifications & Standards							
Grid regulation	VDE0126-1-1, G83/2, ERDF-NOI-RES_13E	VDE-AR-N 4105, AS4777.2/3, VDE0126-1-1, MEA&PEA, G59/3, NRS097-2-1, IEC61727, EN50438 ERDF-NOI-RES_13E	VDE-AR-N4105, AS4777.2/3, IEC61727, VDE0126-1-1, EN50438, NRS097-2-1, G59/3, ERDF-NOI-RES_13E;			AS4777.2/3, VDE-AR-N 4105, VDE0126-1-1, MEA&PEA, G59/3, NRS097-2-1, IEC61727, EN50438 ERDF-NOI-RES_13E	VDE-AR-N 4105, IEC61727, VDE0126-1-1, EN50438, G59/3;
Safety	IEC62109-1&-2, AS3100						IEC62109-1&-2
EMC	EN 61000-6-1,EN 61000-6-2,EN 61000-6-3,EN 61000-6-4, EN 61000-3-11, EN 61000-3-12						
General Data							
Dimensions (WxHxD) [mm]	516*650*203						
Weight [kg]	39						40
Mounting	Wall bracket						
Ambient temperature range	-25~60°C (>45°C derating)						
Relative humidity	0~95%						
Max. operating altitude	4000m(> 3000m derating)						
Protection degree	IP65						
Topology	Transformerless						
Night power consumption [W]	<1						
Cooling	Fan cooling						
Noise emission [dB]	<45						
Display	5.0" LCD						
Communication	USB2.0; RS485 or WiFi						
Standard warranty [years]	5/10/15/20/25 (optional)						

ES Series

The GoodWe ES series bi-directional energy storage inverter is applicable with both on-grid and off-grid PV systems. It can control the flow of energy intelligently. During daytime, the PV plant generates electricity which can be provided to the loads, fed into the grid or charge the battery. The electricity stored can be released when the loads require it during the night. Additionally, the power grid can also charge the storage devices via the inverter.

- Innovative solution for Energy Storage
- Charge controller and inverter integrated
- Intelligent battery management function
- Capable of being grid-interactive or grid-independent
- Compatible with both Lead-acid and Li-Ion battery
- More security & performance for same costs
- IP65 dust-proof and water-proof rating
- 45°C full-load output
- Monitoring inverters freely via computers or mobile phones
- Fanless low-noise design

Technical Data

	GW5048D-ES	GW3648D-ES
Solar		
Max. allowed PV Power [W]	6000	4600
Nominal DC Power [W]	5000	4200
Max. DC voltage [V]	580	580
MPPT voltage range [V]	125~550	125~550
Starting voltage [V]	150	150
Max. DC current [A]	11/11	11/11
No. of DC connectors	2	2
No. of MPPTs	2 (can parallel)	2 (can parallel)
DC connector	MC4/ Phoenix/ Amphenol	MC4/ Phoenix/ Amphenol
Battery		
Battery type	Lead-acid or Li-Ion	Lead-acid or Li-Ion
Norminal Voltage [V]	48	48
Max Discharge power [W]	4600	3600
MAX Charge power [W]	2300, programmable	2300, programmable
Battery capacity [Ah]	≥ 100 (depending requirement)	≥ 100 (depending requirement)
Charging curve	3-stage adaptive with maintenance	3-stage adaptive with maintenance
Charging voltage [V]	60 (optional)	60 (optional)
Battery temperature compensation	Included (Li-Ion)	Included (Li-Ion)
Battery voltage sense	Integrated	Integrated
Current shunt	Integrated	Integrated
AC Output Data		
Norminal AC power [W]	4600	3600
Max. AC power [W]	4600/4850/4950/5100*	3600
Peak power (Back-up) [W]	1.5x Pnom, 10sec	1.5x Pnom, 10sec
Max. AC current [A]	20/21**	16
Norminal AC output	50/60Hz; 230Vac	50/60Hz; 230Vac
AC output range	45~55Hz/55~65Hz; 180~270Vac	45~55Hz/55~65Hz; 180~270Vac
AC output (Back-up)	230Vac ±2%, 50Hz(60Hz optional) ±0.2%, THDv<3% (linear load)	
THDi	<1.5%	<1.5%
Power factor	0.8 leading~0.8 lagging	0.8 leading~0.8 lagging
Grid connection	Single phase	Single phase
Efficiency		
Max. efficiency	97.6%	97.6%
Euro efficiency	>97.0%	>97.0%
MPPT adaptation efficiency	99.9%	99.9%
Protection		
Residual current monitoring unit	Integrated	Integrated
Anti-islanding protection	Integrated	Integrated
DC switch (PV)	Integrated (optional)	Integrated (optional)
AC over current protection	Integrated	Integrated
Insulation monitoring	Integrated	Integrated
Certifications&Standards		
Grid regulation	VDE-AR-N4105, VDE 0126-1-1, G83/2, G59/3, AS4777.2/3	
Safety	IEC62109-1&-2, AS3100, IEC62040-1	
EMC	EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN61000-3-11, EN61000-3-12	EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN61000-3-2, EN61000-3-3
General Data		
Dimensions (WxHxD) [mm]	516*440*184	516*440*184
Weight [kg]	30	28
Mounting	Wall bracket	Wall bracket
Ambient temperature range	-25~60°C (>45°C derating)	-25~60°C (>45°C derating)
Relative humidity	0~95%	0~95%
Max. operating altitude	4000m(> 3000m derating)	4000m(> 3000m derating)
Protection degree	IP65	IP65
Topology	Transformerless	Transformerless
Standby losses [W]	<8	<8
Cooling	Natural convection	Natural convection
Noise emision [dB]	<25	<25
Display	LED light & APP	LED light & APP
Communication	USB2.0; WiFi	USB2.0; WiFi
Standard warranty [years]	5	5

*4600 for VDE-AR-N4105, 4850 for Thailand, 4950 for Australia, 5100 for other countries

**21 for Thailand, 20 for other countries



BP Series

The GoodWe BP series DC-coupled battery storage retrofit device is compatible with most single-phase on-grid inverters. Ordinary PV stations can be upgraded to PV energy storage systems with the addition of a BP retrofit device. During daytime, the PV system generates electricity which can be firstly provided to the loads. Then the excess energy will charge the battery via the BP retrofit device. During the night, battery discharges via BP retrofit device, then electricity will be provided to the loads via PV inverter. The GoodWe BP series improves self consumption ratio greatly.

- Normal on-grid system equipped with storage function
 - Intelligent battery management function
 - BMS communication integrated
 - Nominal 48V battery, secure and reliable
- Easy access to single-phase on-grid system
 - Higher self-consumption ratio
 - IP65 protection class
- Up to 10 safety measurements
 - Max. Battery Charge efficiency 96%
 - Fanless low-noise design
 - 45°C full-load output

Technical Data

GW2500-BP

PV input	
Max. PV input power [W]	6000
Max. PV input voltage [V]	600
Working voltage range [V]	150~500
Max. PV input current [A]	25
No. of PV input & output connectors	1/1
PV connector	MC4/ Phoenix/ Amphenol
Battery	
Battery Type	Lead-acid or Li-Ion
Norminal Voltage [V]	48
MAX Charge Voltage [V]	60 (optional)
MAX Discharge/Charge current [A]	50/50
MAX Discharge/Charge power [W]	2500/2500
Battery capacity [Ah]	50~1000
Charging curve	3-stage adaptive with maintenance
BP output (without PV)	
Rated output voltage [V]	360
Output voltage range [V]	250~360
Max output current [A]	10
Protection	
Battery over & low voltage protection	Integrated
Over current protection	Integrated
Output current short protection	Integrated
Efficiency	
Max. Battery Charge efficiency	96.0%
Max. Battery Discharge efficiency	96.5%
Certifications & standards	
Safety/EMC	CE
General data	
Dimensions (WxHxD) [mm]	344*274.5*128
Weight [kg]	8
Mounting	Wall bracket
Ambient temperature range	-25~60°C(>45°C derating)
Relative humidity	0~95%
Max. operating altitude	4000m(>3000m derating)
Protection degree	IP65
Topology	High frequency insulation
Standby losses [W]	<8
Cooling	Nature convection
Noise emission [dB]	<25
Display	LCD & LED light
Communication	USB2.0;WiFi;RS485
Standard warranty [years]	5



H-ES Series (Hybrid Energy Storage System)

Hybrid Energy Storage System with Energy Management System (EMS) is a new kind of power solution. Via an integrated control system with adaptive logic, the EMS can control and optimize the flow of energy so as to realize the maximum rate of PV self-sufficiency. The electricity produced by PV system can supply power to the loads directly and charge the battery as the first priority. The excess solar energy can be fed into the grid. Mean while, the lack of electricity can also be supplemented from the grid.

- Hybrid PV system with high integration
 - Backup function in off-grid situation
 - Operating as UPS
 - Automatic mode switching without delay
- Low noise
 - Modular design, convenient to install and dismantle
 - Intelligent EMS function
- Battery configured up to 15kWh
 - Integrated with reliable BMS
 - Support with iOS / Android APPs (to enable remote monitoring)

Technical Data

GW5048H-ES

Solar

Max. PV power	6000W
Max. PV voltage	580V
MPPT voltage range	125~550V
Max. PV current	11A Per String
No. of PV connectors	2
No. of MPPTs	2(can parallel)
PV connector	SUNCLIX / MC4 /H4(Optional)

Battery

Battery Type	Lithium Iron Phosphate
Singlemodule capacity	48V 50Ah
Singlemodule energy	2.5KWh
Singlemodule Charging rate	0.5C
Singlemodule Discharging rate	0.5C
DOD	80%
MAX. Module NO.	6 (15KWh)
MAX Discharge power (W)	4600
MAX Charge power (W)	2300
Charging curve	3-stage adaptive with maintenance
Working temperature	0°C ~40°C
Temperature Compensation	Li-Ion integrated
Over current protection	Li-Ion integrated

AC Output (ON-GRID)

Norminal power(W)	4600
Norminal current(A)	20
AC output range	45~55Hz/55~65Hz; 180~270Vac
THDi	<1.5%
Power factor	0.9 leading~0.9 lagging
Grid connection	Single phase

AC output (Back-up)

Norminal power(W)	4600
Norminal current(A)	20
Peak power(W)	1.5x Pnom, 10sec
Norminal output	230Vac ±2%, 50Hz (60Hz Optional)±0.2%
THDv	<3%(linear load)

Efficiency

Max. PV to grid efficiency	97.6%
PV to grid Euro efficiency	>97.0%
MPPT adaptation efficiency	99.9%
Max. PV Charge efficiency	95.5%
Max. Grid Charge efficiency	93.5%
Max. Battery Discharge efficiency	94.0%

Protection

Residual current monitoring unit	Integrated
Anti-islanding protection	Integrated
DC switch(PV)	Integrated
AC over current protection	Integrated
Insulation monitoring	Integrated

Certifications&Standards

Grid regulation	VDE4105, VDE 0126-1-1/A1, G83/2, G59/3, AS4777.2/3
Safety	IEC62109-1&-2, AS3100, IEC62040-1
EMC	EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN61000-3-11, EN61000-3-12

General Data

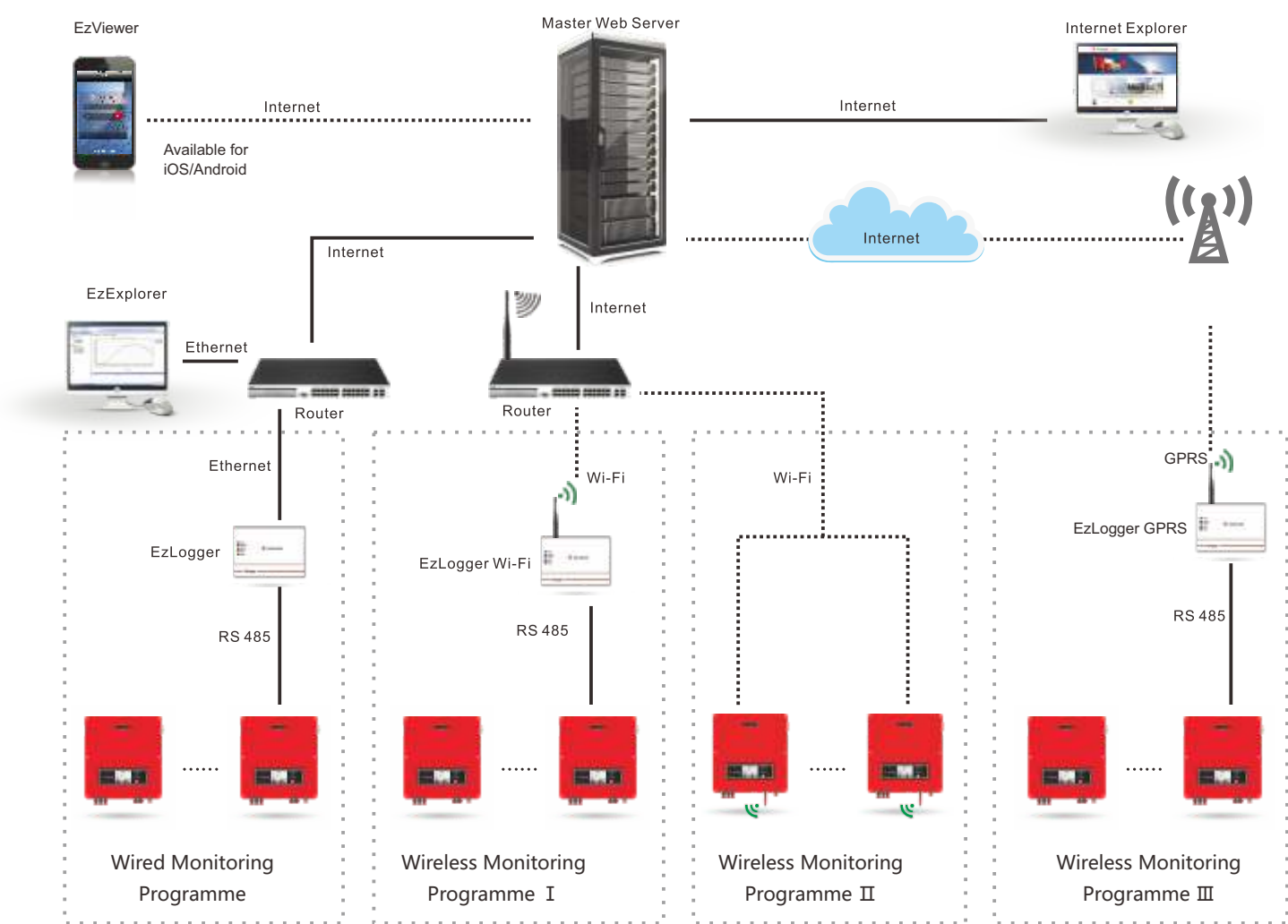
Dimensions (WxHxD)	658*1500*602mm
Weight (kg)	150(without battery)
Mounting	NA
Ambient temperature range	-25~60°C (>45°C derating)
Relative humidity	0~95%
Max. operating altitude	2000m
Protection degree	IP21
Topology	Transformerless
Standby losses(W)	<8
Cooling	Fan cooling
Noise emision(dB)	<45
Display	LED light & APP
Communication	USB2.0; WiFi

GoodWe Monitoring System

General Introduction

We can provide our customers with a flexible internet monitoring solution which is suitable for residential, commercial rooftop systems and PV power plants. System monitoring device is user-friendly and reliable. It can archive all-weather data and automatically transmit data to our global PV monitoring web-server via internet. Our customers can login monitoring website or use smart phone Apps to check power plant information.

Monitoring System Diagram



EzLogger

EzLogger is a self-developed monitoring device by GoodWe. In combination with a GoodWe solar inverter, it can easily read and record all key plant data and constantly transmit the data to the GoodWe portal via internet.

- EzLogger: link to the inverter via RS485 and connect with PC via ethernet, and transmit data to GoodWe monitoring software EzExplorer and GoodWe portal.
- EzLogger Wi-Fi: link to the inverter via RS485 and connect with wireless router via Built - in Wi-Fi communication module, and transmit data to GoodWe portal.
- EzLogger GPRS: link to the inverter via RS485 and connect with internet via Built - in GPRS module, and transmit data to GoodWe portal.

EzViewer

EzViewer is a PV system monitoring App developed by GoodWe which can be installed in your smart phone, iOS and Android available, it can link to GoodWe portal via internet in order to track the behavior and yields of PV power plants at any time.



Internet Monitoring Advantages

- Two basic communication choices of inverter: Wired RS485 and Wi-Fi
- Monitor the global PV power plants and automatically implement data acquisition via internet
- Equipped with data collector designed especially for enterprises to ensure data security
- Log-in web-server at any time via Internet Explorer to obtain information of PV power plants
- Support with iOS / Android APPs, rich and visual graphic display

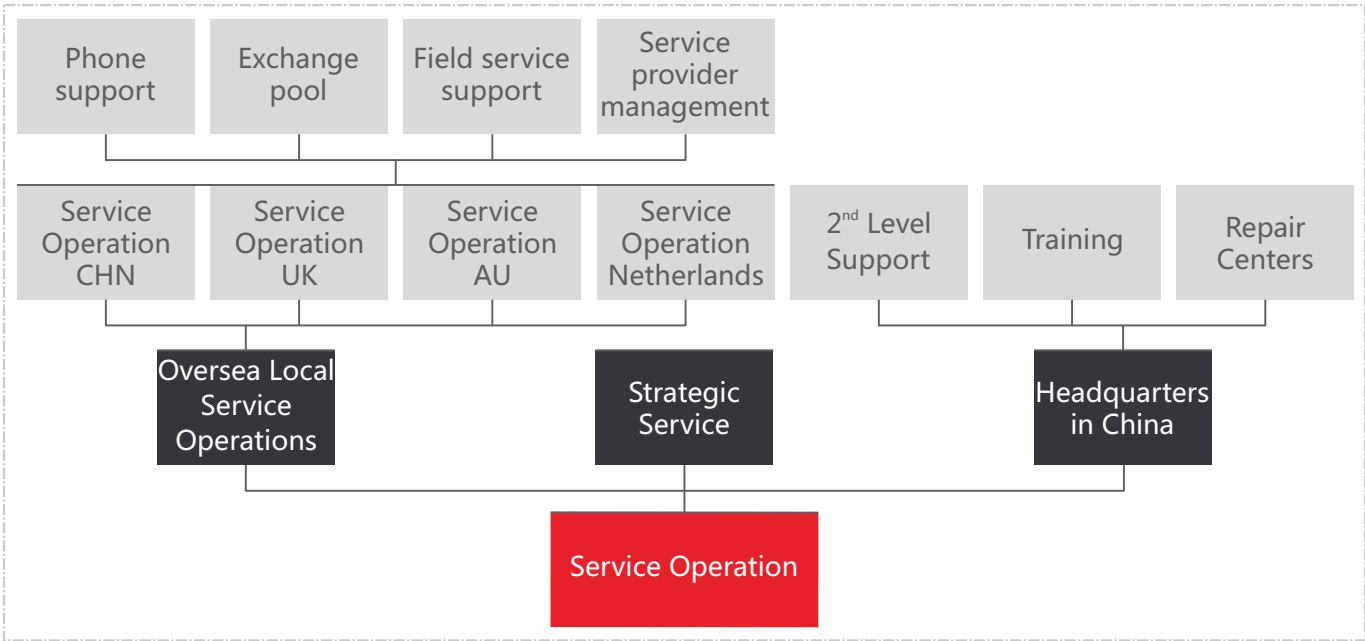
Interface for Internet Monitoring



Five-star Service System of GoodWe



Service Organnazation



GoodWe provides customized warranty service; in order to better service our dear clients, the warranty period is optional, including 5 years, 10 years, 15 years, 20 years and 25 years. Within the warranty period, GoodWe provides repair or replacement services free of charge. In case of any inverter failure beyond quality warranty period, only cost price will be charged for maintenance or machine replacement. The quality warranty period will be prolonged one year for the components after replacement.

GoodWe is cooperating with DSV (a famous international logistics company) and has set up bonded warehouses, to ensure that delivery on time, which is a good way to make the customer's needs our first priority.

Global Service Hotline: +86 4009-281-333



GoodWe Solar Academy



GoodWe Solar Academy is hosted by Goodwe Power Supply Technology Co., LTD and co-organized by a number of strategic partners, focusing on solar industry and product application. It provides an open platform for communication and sharing, offering expertise and advanced training for the participants on GoodWe products and PV solution.

GoodWe Solar Academy can also provide custom-made photovoltaic products' application training, routine problem analysis and typical cases at the same time.

Workshop



Commercial Projects



200kW, Denmark



100kW, Turkey



500kW, Turkey



175kW, Switzerland



200kW, Australia



2MW, Taizhou, China



200kW, UK



30kW, Petrol station



500kW, South Korea



250kW, Shangdong, China



4MW, Jiangsu, China



2MW, Zhejiang, China

Residential Projects



20kW, UK



6kW, South Africa



20kW, Germany



6kW, Denmark



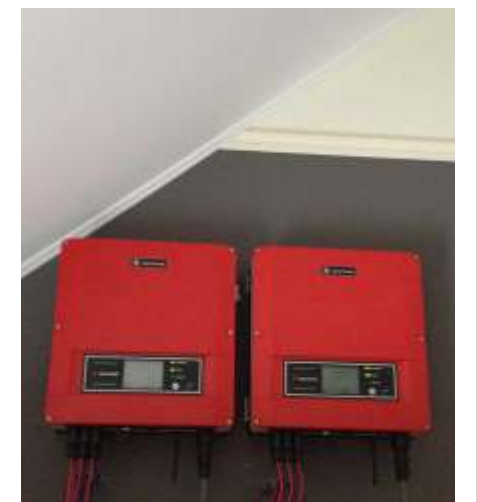
6kW, Denmark



Capel St. Mary (GoodWe Village), UK



4.6kW, South Africa



4kW, Malaysia



8kW, Netherlands



40kW, South Africa

Hybrid Inverter Projects



17kW, Hebei, China



8kW, Denmark



17kW, South Africa



8kW, School of South Africa



16X15kW, Jiangsu, China



5kW, Indonesia



5kW, Australia



5kW, Sydney



5kW, Philippines



5kW, UK

Mode	VDE0126-1-1 (Europe)	VDE-AR-N 4105 (Germany)	EN62109-1&-2 (Europe)	SAA (Australia)	G83/2 (England)	G59/3 (England)	NB-T32004 (China)	EN50438+ VDE0126-1-1/A1 (Poland)	EN50438+ VDE0126-1-1/A1 (Portugal)	NRS 097-2-1 (S. Africa)	MEA+PEA (Thailand)	ERDF-NOI -RES_13E (France)	IEC61727IEC62116 IEC60068/IEC61683 (India)	Remarks
NS Series:														
GW1000-NS														
GW1500-NS														
GW2000-NS														
GW2500-NS														
GW3000-NS														
GW3600-NS														
GW4200-NS														
GW5000-NS														
SS Series:														
GW3600S-UK														
GW3600S-DK														
NDS Series:														
GW3000D-NS														
GW3600D-NS														
GW4200D-NS														
GW5000D-NS														
DS Series:														
GW3600D-UK														
GW3600D-DK														
DT Series:														
GW4000-DT														
GW5000-DT														
GW6000-DT														
GW8000-DT														
GW9000-DT														
GW10KN-DT														
GW4000L-DT														
GW5000L-DT														
GW6000L-DT														
GW09K-DT														
GW10K-DT														
GW12K-DT														
GW15K-DT														
GW17K-DT														
GW20K-DT														
GW25K-DT														
GW30K-DT														
ES Series:														
GW3648D-ES														
GW3648S-ES														
GW4248D-ES														
GW5048D-ES														
BP Series:														
GW2500-BP														

CERTIFICATES



G83



G59

















Type Approved
Safety
Regular Production
Surveillance
www.tuv.com
ID: 2000000000



RD1699

ISO 9001:2008

CEI 0-21





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