



Inverter and Accessory

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Grid-tied String Inverter

Hybrid Inverter

Grid-tied Micro Inverter

Inverter Accessory

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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]	500	500	500	500	500
MPPT voltage range [V]	80~450	80~450	80~450	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

Normal 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
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	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

Norminal AC power [W]	3680	4200	5000*
Max. AC power [W]	3680	4200	5000*
Max. AC current [A]	16	19	22.8
Norminal 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



NEW

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

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

Norminal 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
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	

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, AS4777.2&.3, 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°C (>45°C derating)	-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%	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 emission [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

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

Norminal 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
Norminal 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

Color Options



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

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

Norminal AC power [W]	4000	5000	6000
Max. AC power [W]	4000	5000	6000
Max. AC current [A]	7	8.5	10
Norminal 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)



Photon
Test

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

Technical Data

GW15K-DT

GW17K-DT

GW20K-DT

GW25K-DT

DC Input Data

Max. allowed PV Power [W]	19500	22100	26000	32500
Nominal DC Power [W]	15400	17500	20500	25800
Max. DC voltage [V]	1000	1000	1000	1000
MPPT voltage range [V]	260~850	260~850	260~850	260~850
Starting voltage [V]	250	250	250	250
Max. DC current [A]	22/22	22/22	22/22	27/27
No. of DC connectors	4	4	4	6
No. of MPPTs	2 (can parallel)	2 (can parallel)	2 (can parallel)	2 (can parallel)
DC connector	MC4/ Phoenix/ Amphenol			

AC Output Data

Normal AC power [W]	15000	17000	20000	25000
Max. AC power [W]	15000	17000	20000	25000
Max. AC current [A]	25	25	30	37
Normal 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	98.2%	98.2%	98.4%	98.4%
Euro efficiency	>97.7%	>97.7%	>98.1%	>98.1%
MPPT adaptation efficiency	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	VDE-AR-N4105, AS4777.2/3, IEC61727, VDE0126-1-1, EN50438, NRS097-2-1, G59/3, ERDF-NOI-RES_13E;	AS4777.2/3, En50438, VDE-AR-N 4105, VDE0126-1-1, MEA&PEA, G59/3, NRS097-2-1, IEC61727, 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

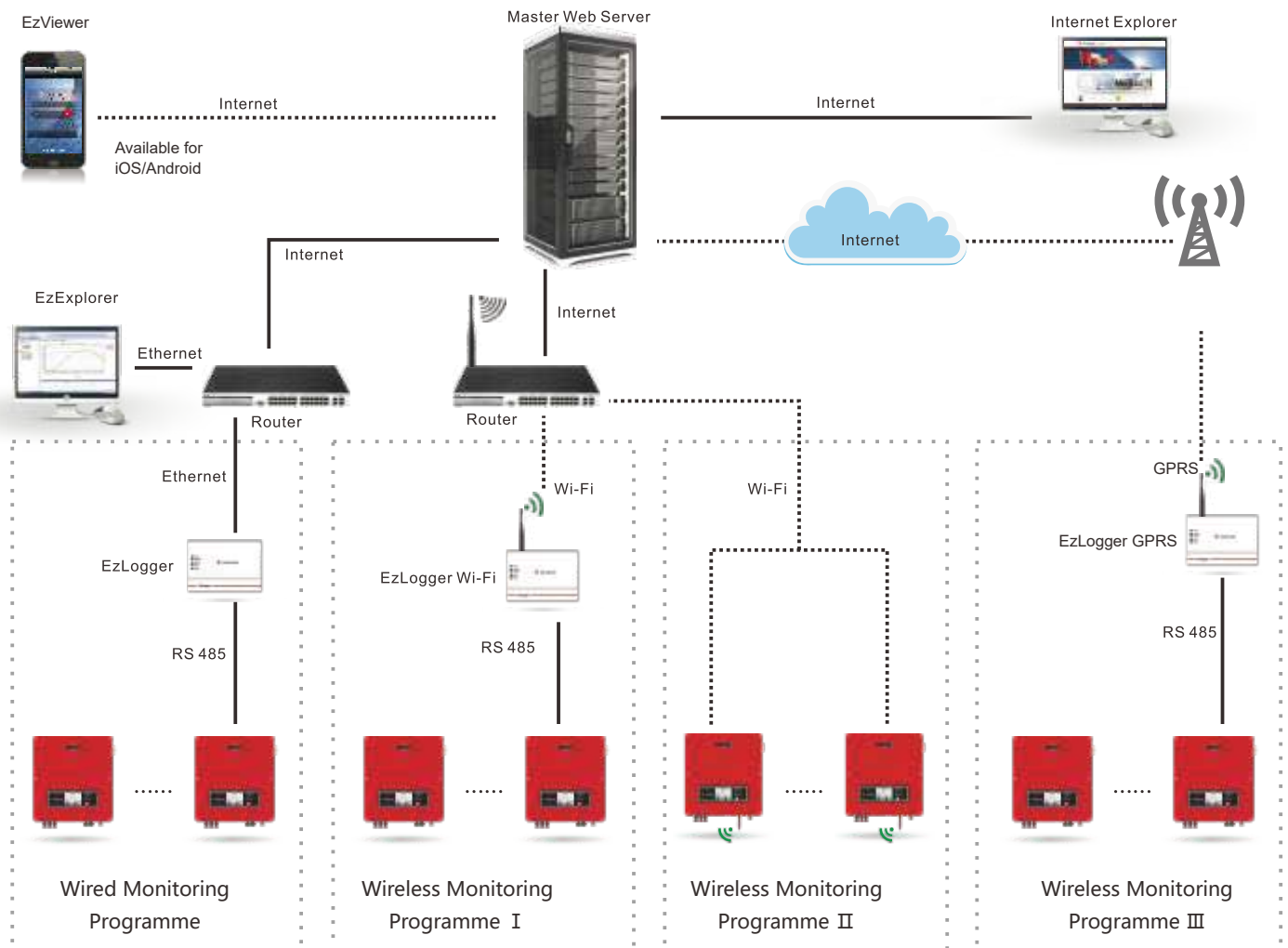
Dimensions (WxHxD) [mm]	516*650*203		
Weight [kg]	39	40	
Mounting	Wall bracket		
Ambient temperature range	-25~60°C (>45°C derating)		
Relative humidity	0~95%		
Max. operating altitude	4000m(> 3000m derating)		
Protection degree	IP65		
Topology	Transformerless		
Night power consumption [W]	<1		
Cooling	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)		

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

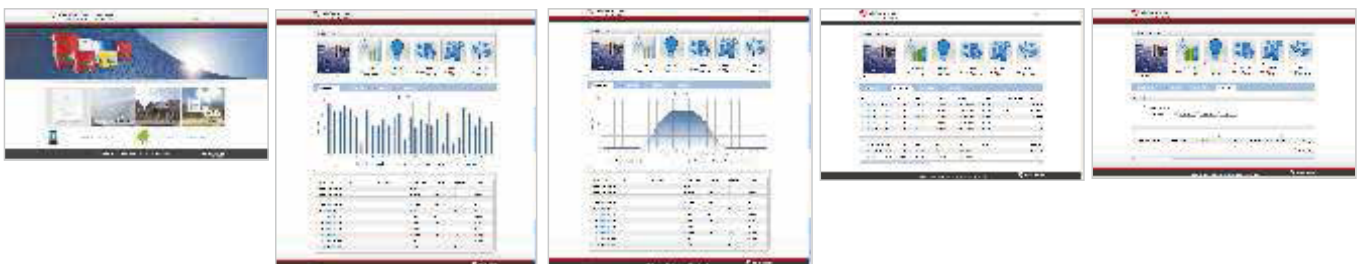
EzViewer is a PV system monitoring App developed by GoodWe which can be installed in your smart phone, iOS and Android available, it can link to GoodWe portal via internet in order to track the behavior and yields of PV power plants at any time.



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



CERTIFICATES

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-N01 -RES_13E (France)	IEC61727/IEC62116 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														





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
Normal Voltage [V]	48	48
Max Discharge power [W]	4600	3600
MAX Charge power [W]	4600, programmable	3600, 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		
Normal 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
Normal 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 emission [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



ReplusTM

by ReneSola

Replus-250



Features

- Maximum power Production; Resilient to dust, debris, and shading
- MPPT efficiency greater than 99.5%; No single point of system failure
- Simplified PV system design & installation; Performance monitoring for each PV module
- Low input voltage DC, improved safety, and reduced risk of electrocution

INTRODUCTION

The smart design of ReneSola's Micro Replus inverters improves solar PV harvesting and reliability. The Micro Replus system includes the micro-inverter, MRG Communications Gateway, and Monitoring Software.

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Input(DC)	Replus-250
Recommended PV-Generator Power (Wp)	250
Max.DC Voltage [V]	60
MPPT DC Voltage Rangeset [V]	22-55
Max.DC Current [A]	14
Max.Units per Branch Circuit	13

Output (AC)	
Nominal AC Power(W)	220
Max.AC Output Current(A)	1.1
Nominal AC Voltage / Range(V)	230 / 180—270
Nominal AC Frequency / Range(Hz)	50 / 45.5-54.5
Remote Adjust Parameters	over / under voltage, over / under frequency, reconnection time
Power Factor(cosΦ)	>0.99 (full load)
THD	<3% (full load)

Protection	
Over / Under Voltage Protection	Yes
Over / Under Frequency Protection	Yes
Anti-Islanding Protection	Yes
Over Current Protection	Yes
Reverse DC Polarity Protection	Yes
Overload Protection	Yes

Output (AC)	
Peak Efficiency	96.3%
CEC Efficiency	95.0%
MPPT Efficiency	>99.5%

General Data	
Degree of Protection	IP66 / IP67
Power Consumption at Night(W)	<0.17
Operation Ambient Temperature	-40°C~+65°C
Relative Humidity	0-95%
Display	LED Indicator
Communication	PLC(Power Line Communication)
Dimensions(WxHxD)(mm)	230*138*35
Weight(kg)	2.0(including Cables&Connectors)
Warranty	25-year limited warranty
Compliance	AS 4777.2, AS 4777.3, AS / NZS 3100, AS / NZS 61000.6.3; IEC 62109-1 / 2, EN 62109-1 / 2; DIN V VDE V 0126-1-1, VDE-AR-N 4105, DIN V VDE V 0124-100; G83, PPP 59014; 2013; EN 61000-6-2 / 3; EN 50438; C10 / 11; IEC 61727
DC Connector Type	MC4, QC4 or PV-JM601



ReplusTM

by ReneSola

Replus-250A / Replus-250B



Features

- Maximum power Production; Resilient to dust, debris, and shading
- MPPT efficiency greater than 99.5%; No single point of system failure
- Simplified PV system design & installation; Performance monitoring for each PV module
- Low DC input voltage, resulting in safe installation

INTRODUCTION

The smart design of ReneSola's Micro Replus inverters improves solar PV harvesting and reliability. The Micro Replus system includes the micro-inverter, MRG Communications Gateway, and Monitoring Software.

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Input(DC)	Replus-250A	Replus-250B
Max.PV-Generator Power [Wp]	250	250
Max.DC Voltage [V]	55	55
MPPT DC Voltage Ranget [V]	22-45	22-45
Max.DC Current [A]	14	14
Max.Units per Branch Circuit	15	12

Output (AC)	Replus-250A	Replus-250B
Rated Maximum Continuous Output Power [W]	225	217
AC Max.cont.Output Current [A]	1.0	1.2
Nominal AC Voltage / Range [V]	240 / 211~264	208 / 186~228
AC Power Frequency / Range [Hz]	60 / 59.3~60.5	60 / 59.3~60.5
Power Factor [cosΦ]	>0.95	>0.95
Maximum Output Fault Current [Aac]	1.5	1.5
Total Harmonic Distortion [THD]	<5%	<5%

Protection	
Over / Under Voltage Protection	Yes
Over / Under Frequency Protection	Yes
Anti-Islanding Protection	Yes
Over Current Protection	Yes
Reverse DC Polarity Protection	Yes
Overload Protection	Yes

Output (AC)	
Peak Efficiency	96.3%
CEC Efficiency	95.0%
MPPT Efficiency	>99.5%

General Data	
Degree of Protection	NEMA 6
Power Consumption at Night [W]	<0.17
Operation Ambient Temperature	-40°C~+65°C
Relative Humidity	0~95%
Display	LED Indicator
Communication	PLC(Power Line Communication)
Dimensions [WxHxD]	9.06*5.44*1.38 inch / 23.*138*35 mm
Weight	4.4 lbs / 2.0 kg (including cables&connectors)
Warranty	25-year limited warranty
Compliance	UL1741 / CSA-C22.2 No.107.1 / FCC Part 15Class B, AS4777.2, AS4777.3

New Generation

The New Generation Micro Replus Inverters of ReneSola can effectively improve solar PV harvesting and reliability. The Micro Replus system mainly includes the Micro Inverter, trunk cable, Communication Gateway and Monitoring software.

- MPPT efficiency greater than 99.5%; Maximum power production; Resilient to dust, debris and shading.
- Higher AC output power, suitable for all 72 cells module up to 300W.
- Higher system efficiency (Max: 96.30%).
- Trunk cable system architecture, effectively reduces influence of AC cable fault.
- Integrated grounding technology, Simplified system installation
- Single module monitoring, convenient maintenance
- Low input DC voltage, more safety and reduced risk of electrocution.



MODEL	Replus -300-240A	Replus -300-208A	
INPUT(DC)	Max Recommended PV Power(Wp)	300	300
	Max DC Open Circuit Voltage(V)	60	60
	Max DC Input Current (A)	12	12
	MPPT Tracking Accuracy	>99.5%	>99.5%
	MPPT Tracking Range(V)	22-55	22-55
OUTPUT(AC)	Rated AC Output Power(W)	250	250
	Nominal Power Grid Voltage(V)	240 / 220	208/ 220
	Allow able Power Grid Voltage(V)	211-264 / 198-253	186-228 / 198-253
	Allow able Power Grid Frequency(Hz)	59.3-60.5 / 45.5-52.5	59.3-60.5 / 45.5-52.5
	THD	<3%(at rated power)	<3% (at rated power)
	Power Factor	>0.95	>0.95
SYSTEM EFFICIENCY	Peak Efficiency	96.3%	96.3%
	CEC Efficiency	95.5%	95.5%
	Night Time Tire Loss(W)	0.8	0.6
PROTECTION FUNCTIONS	Over/Under Voltage Protection	Yes	Yes
	Over/Under Frequency Protection	Yes	Yes
	Anti-Islanding Protection	Yes	Yes
	Over Current Protection	Yes	Yes
	Reverse DC Polarity Protection	Yes	Yes
	Overload Protection	Yes	Yes
	Protection Degree	NEMA-6	NEMA-6
	Environment Temperature	-40°C ~+65°C	-40°C ~+65°C
OTHER PARAMETERS	Environment Humidity	0-95% non-condensation	0-95% non-condensation
	Display	LED LIGHT	LED LIGHT
	Communications	Power Line Communication	Power Line Communication
	Dimension (D-W-H mm)	263*200.46*25	263*200.46*25
	Weight(Kg)	2.2	2.2

New Generation

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MODEL	Replus-300-AU	
INPUT(DC)	Max Recommended PV Power (Wp)	300
	Vmax PV (absolute maximum) (Vdc)	60
	PV Input Operating Voltage Range (Vdc)	22-55
	Maximum Operating PV Input Current (Adc)	12
	MPPT Tracking Accuracy	>99.5%
	Isc PV (absolute maximum) (Adc)	14
	Maximum Inverter Backfeed Current to the Array (Adc)	0
OUTPUT(AC)	Rated AC Output Power (W)	250
	Nominal Power Grid Voltage (Vac)	230
	Current (maximum continuous) (Aac)	1.2
	Current (inrush) (Peak and Duration)	12A, 15us
	Nominal Frequency (Hz)	50
	Power Factor	>0.95
	Maximum Output Fault Current (Aac)	1.5
	Maximum Output Overcurrent Protection (Aac)	6.3
SYSTEM EFFICIENCY	Peak Efficiency	96.30%
	CEC Efficiency	95.5%
	Night Time Tare Loss (W)	0.07
PROTECTION FUNCTIONS	Over/Under Voltage Protection	Yes
	Over/Under Frequency Protection	Yes
	Anti-Islanding Protection	Yes
	Over Current Protection	Yes
	Reverse DC Polarity Protection	Yes
	Overload Protection	Yes
	Protective Class	I
	IP Rating per Part 1	IP66 / IP67
	Environment Temperature	-40°C ~ +65°C
	Environment Humidity	0-95% non-condensation
OTHER PARAMETERS	Display	LED LIGHT
	Communications	POWERLINE
	Dimension (D-W-H mm)	263*200.46*25
	Weight(Kg)	2.2

New Generation

The New Generation Micro Replus Inverters of ReneSola can effectively improve solar PV harvesting and reliability. The Micro Replus system mainly includes the Micro Inverter, trunk cable, Communication Gateway and Monitoring software.

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- Single module monitoring, convenient maintenance
- Low input DC voltage, more safety and reduced risk of electrocution.



EN 50438 C10/11 IEC61727

MODEL	Replus-300-EU	
INPUT(DC)	Max Recommended PV Power (Wp)	300
	Vmax PV (absolute maximum) (Vdc)	60
	PV Input Operating Voltage Range (Vdc)	22-55
	Maximum Operating PV Input Current (Adc)	12
	MPPT Tracking Accuracy	>99.5%
	Isc PV (absolute maximum) (Adc)	14
	Maximum Inverter Backfeed Current to the Array (Adc)	0
OUTPUT(AC)	Rated AC Output Power (W)	250
	Nominal Power Grid Voltage (Vac)	230
	Current (maximum continuous) (Aac)	1.2
	Current (inrush) (Peak and Duration)	12A, 15us
	Nominal Frequency (Hz)	50
	Power Factor	>0.95
	Maximum Output Fault Current (Aac)	1.5
	Maximum Output Overcurrent Protection (Aac)	6.3
SYSTEM EFFICIENCY	Peak Efficiency	96.30%
	CEC Efficiency	95.5%
	Night Time Tare Loss (W)	0.07
PROTECTION FUNCTIONS	Over/Under Voltage Protection	Yes
	Over/Under Frequency Protection	Yes
	Anti-Islanding Protection	Yes
	Over Current Protection	Yes
	Reverse DC Polarity Protection	Yes
	Overload Protection	Yes
	Protective Class	I
	IP Rating per Part 1	IP66 / IP67
	Environment Temperature	-40°C ~ +65°C
	Environment Humidity	0-95% non-condensation
OTHER PARAMETERS	Display	LED LIGHT
	Communications	POWERLINE
	Dimension (D-W-H mm)	263*200.46*25
	Weight(Kg)	2.2



ReplusTM

by ReneSola

Micro Replus Gateway (MRG)

Features

- Aesthetically pleasing with a durable design and airtight sealing. Easy-to-use energy saving touch screen LCD display provides real time system performance monitoring
- Embedded with state of the art and latest software technology. Power Line Carrier (PLC) mode provides inverter communication. Smart internal memory card integration stores performance data for up to 20 years. Local monitoring via Ethernet connection allows accurate web page monitoring of the inverter's operating status
- Supports various external hardware such as a USB keyboard
- Remote intelligent monitoring allows user to login and monitor system performance anytime from anywhere
- Small size, light weight, and use minimal power



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Technical specifications

Nominal voltage	208V / 230V / 240V
Nominal frequency	50 / 60 Hz
Number of monitored devices	1 to 80
Protection class	IP20 / indoor
Ambient temperature	-20°C to + 55°C
Communication	PLC / 10 M / 100 M Ethernet
Power consumption	< 5 W
Dimensions (D x W x H)	37 x 148 x 113 mm / 1.46 x 5.83 x 4.45 inch
Weight	342 g / 0.75 lbs
Standard warranty	1 year
Compliance	UL 60950-1, FCC Part 15, CSA C22.2 No 60950-1, AS/NZS 60950.1, AS/NZS CISPR 22, EN 60950-1, EN 55022

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