GOODWE
YOUR SOLAR ENGINE

COMMERCIAL, INDUSTRIAL & UTILITY

SOLAR SYSTEM SOLUTIONS

www.goodwe.com


BOOST YOUR
POWER & PROFIT
17-136 kW

50% oversizing

50% DC Input Oversizing Ratio

15% overloading

15% AC Output Overloading Ratio

Max Efficiency 99%

Arc-Fault Circuit-Interrupter

PLC 2.0

Second Generation of Power Line Communication

String Level Monitoring

SDT G2 Series
2-MPPT, Three-Phase

SMT Series
3-MPPT, Three-Phase

MT Series
4-MPPT, Three-Phase

HT Series
12-MPPT, Three-Phase

100kWp Solar Power Plant Solution

Project Information

Project Location: Munich / GERMANY
PV Panel: 350 Wp Monocrystalline
Inverter: GW30K-MT GoodWe three phase commercial inverter
Installed DC Capacity: 288 pcs x 0.35 kWp = 100,8 kWp
Installed Rated AC Capacity: 3 pcs x 30 kW = 90 kW
DC / AC Ratio: 1.12

* The GoodWe SMT series inverter features a 30-50% DC oversizing capability. In that project 12% DC oversizing applied considering the strong level of irradiation of Germany.

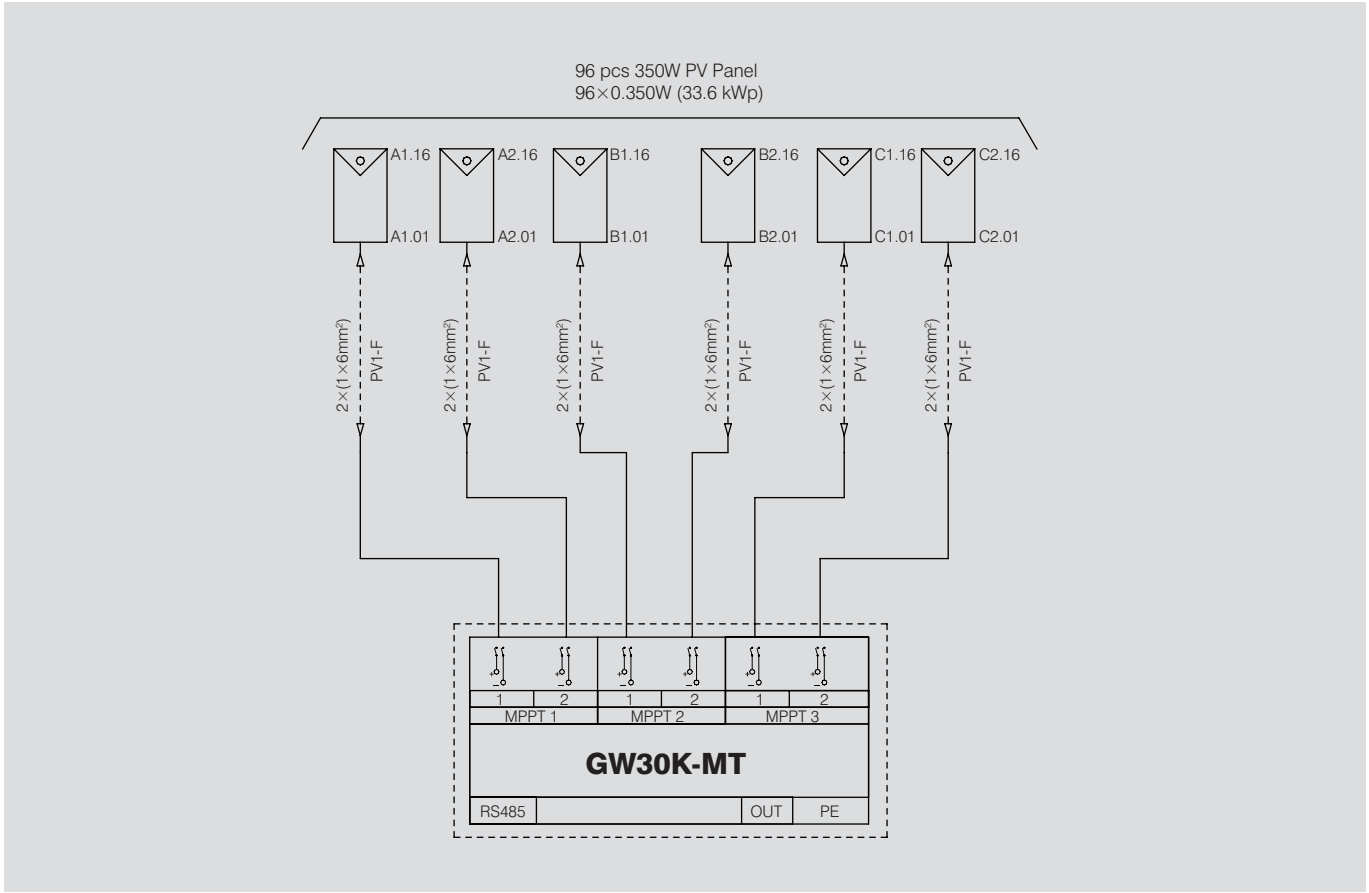
Project Components

No.	Material	Description	Quantity
1	PV Panel	350 Wp Monocrystalline	288
2	Inverter	GoodWe GW30K-MT	3
3	Construction Material	Rooftop Supporting System, Preferably Aluminum	1 Package
4	DC Cable	1x6 mm^2	1.250 mt.
5	AC Cable	5x16 mm^2	150 mt.
6	Comm. Cable	RS485	100 mt.
7	AC Board	3 Leakage Current Protection, 3 Sub Breaker, 1 SPD, 1 Main Switch	1
8	Datalogger	EzLogger Pro (with RS485 com. Method)	1

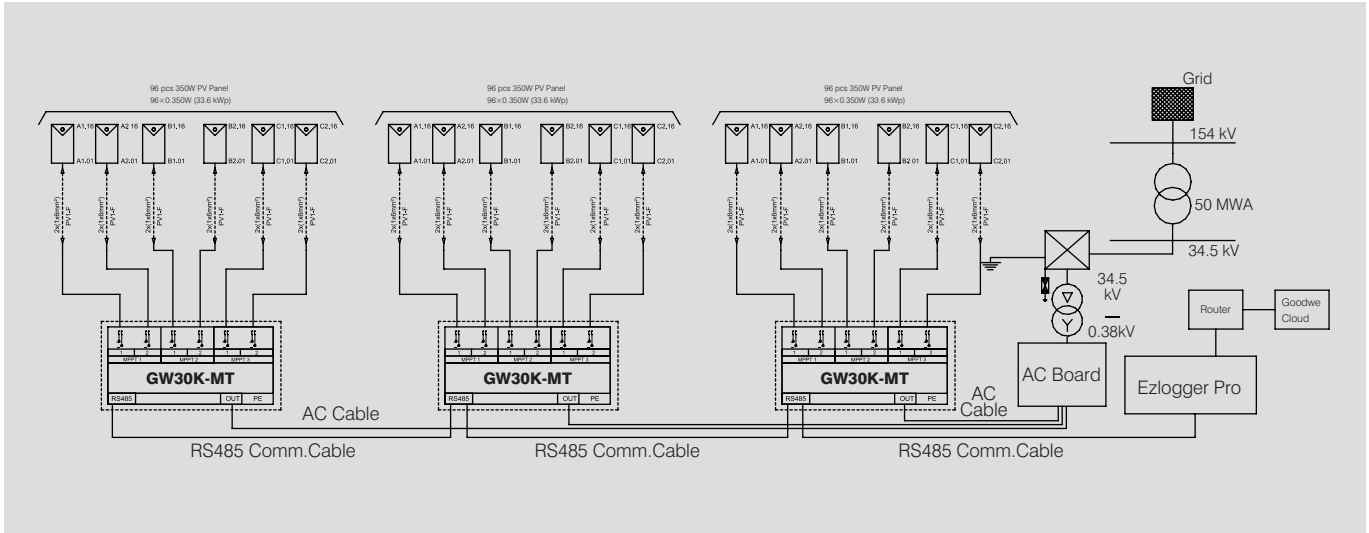
PV Panel Main Features

Maximum Power (Pmax)	350 Wp
Maximum Power Voltage (Vmp)	39.1 V
Maximum Power Current (Imp)	8.94 A
Open-circuit Voltage (Voc)	47.5 V
Size & Weight	1956×992×40 mm 26.5 kg

Cabling & Connections Diagram



* Connection diagram. Each string is connected with 16 PV Panels. The total capacity is 6 string x 16 = 96 pcs.



* The GoodWe Ezlogger Pro features 3 communication inputs per inverter. Each communication port can support up to 20 inverters. In total, 60 inverters can be connected. (The GoodWe monitoring box SCB1000 is also available).
* The Max. effective RS485 distance is 1000m for EzloggerPro.
* EzloggerPro is able to perform string level monitoring.

PV System Efficiency Report

Grid-Connected System: Main Results

Project : **100kW_Germany**

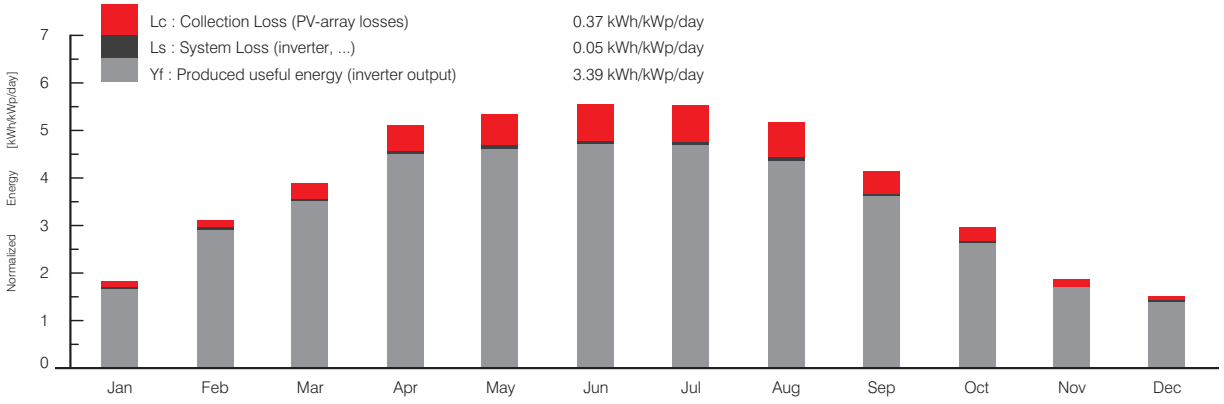
Simulation Variant : **100kW_Germany**

Main System Parameters				
System Type		**No 3D Scene Defined, No Shadings**		
PV Field Orientation	Tilt	38°	Azimuth	0°
PV Modules	Model	JKM 350M-72-V	Pnom	350 Wp
PV Array	No. of Modules	288	Pnom Total	**101 kWp**
Inverter	Model	GW30K-MT	Pnom	30.0 kW ac
Inverter Pack	No.of Units	3.0	Pnom Total	**90.0 kW ac**
User's Needs	Unlimited Load (Grid)			

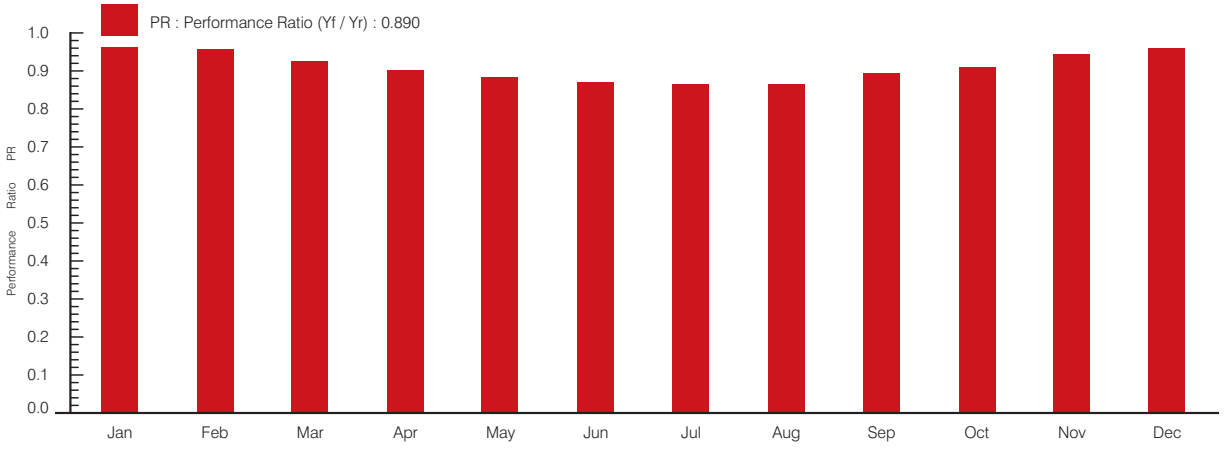
Main Simulation Results

System Production	**Produced Energy**	**124.9 MWh/year**	Specific Prod.	1239 kWh/kWp/year
	Performance Ratio PR	88.97%		

Normalized productions (per installed kWp): Nominal power 101 kWp



Performance Ratio PR



* This report illustrates how the DC oversizing of this installation contributes to increase the total production. If we had followed a 1:1 DC/AC ratio arrangement, the total production would have been 10% lower.

1MWp Solar Power Plant Solution

Project Information

Project Location: Munich / GERMANY
PV Panel: 350 Wp Monocrystalline
Inverter: GW80K-MT GoodWe three phase commercial inverter
Installed DC Capacity: 2880 pcs x 0.35 kWp = 1008 kWp
Installed Rated AC Capacity: 12 pcs x 80 kW = 960 kW
DC / AC Ratio: 1.05

* The GoodWe MT series inverter features a 30-50% DC oversizing capability. In that project 5% DC oversizing applied considering the strong level of irradiation of Germany.

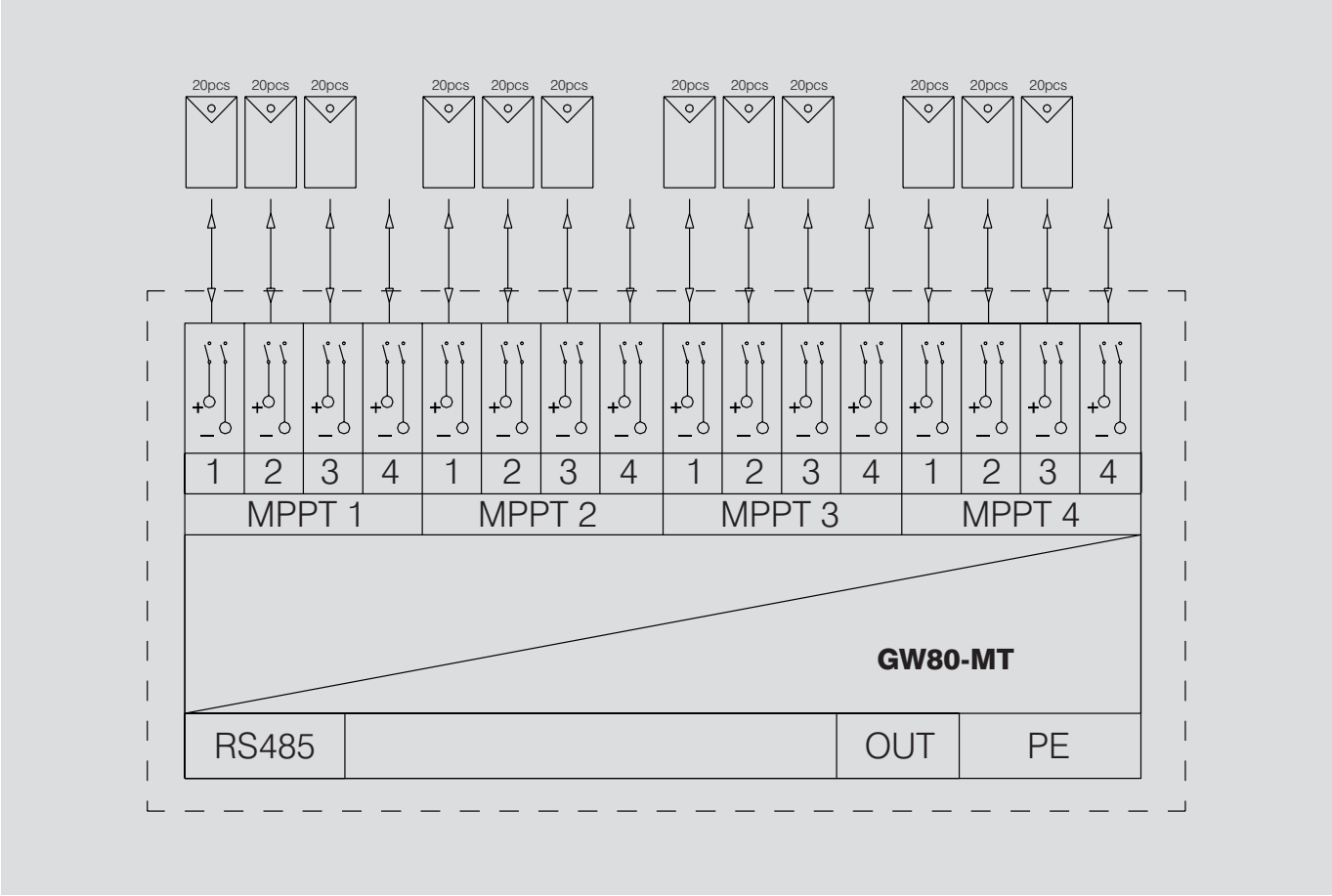
Project Components

No.	Material	Description	Quantity
1	PV Panel	350 Wp Monocrystal	2880
2	Inverter	GoodWe GW80K-MT	12
3	Construction Material	Rooftop Supporting System, Preferably Aluminum	1 Package
4	DC Cable	1x6 mm^2	13.000 mt.
5	AC Cable	5x35 mm^2	3.000 mt.
6	Comm. Cable	RS485	200 mt.
7	AC Board	4 Leakage Current Protection, 4 Sub Breaker, 1 SPD, 1 Main Switch	3
8	HV Building	Transformer, AC Main Board, Protection Cells	1
9	Datalogger	EzLogger Pro (with RS485 com. Method)	1

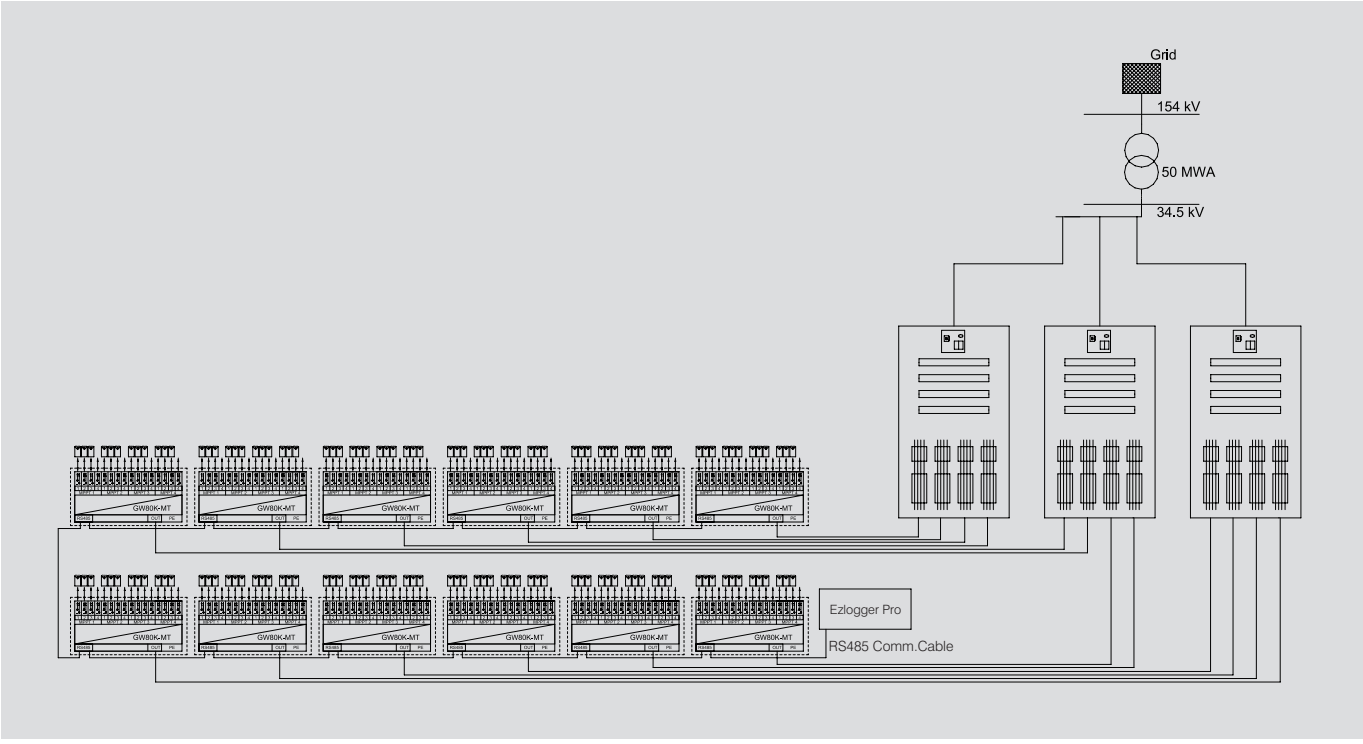
PV Panel Main Features

Maximum Power (Pmax)	350 Wp
Maximum Power Voltage (Vmp)	39.1 V
Maximum Power Current (Imp)	8.94 A
Open-circuit Voltage (Voc)	47.5 V
Size & Weight	1956×992×40 mm 26.5 kg

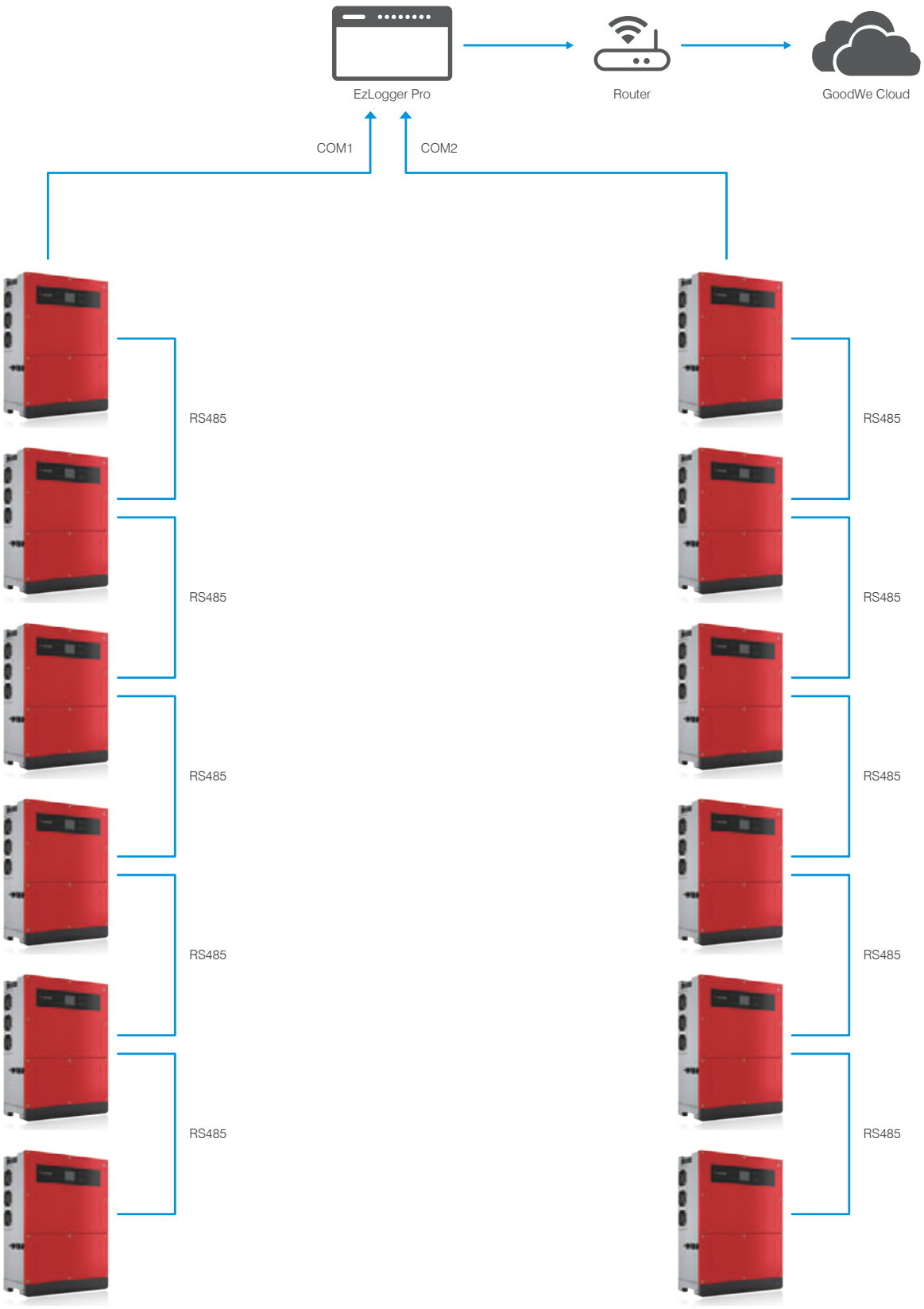
Cabling & Connections Diagram



* Connection diagram. Each string is connected with 20 PV Panels. Total project size: 12 string x 20 = 240 pcs. To reach a higher voltage, we left one DC input on each MPPT unused, instead, more PV panels are connected to the remaining 3 DC inputs.



Communication (RS485) connection diagram.



* The GoodWe Ezlogger Pro features 3 communication inputs per inverter. Each communication port can support up to 20 inverters, achieving a total capacity of 60 inverters that can be connected. (There is also another monitoring box which is called SCB1000).
* The Max. effective RS485 distance is 1000m for EzloggerPro.
* EzloggerPro can perform string level monitoring.

PV System Efficiency Report

Grid-Connected System: Main Results

Project : **1MW_Germany**

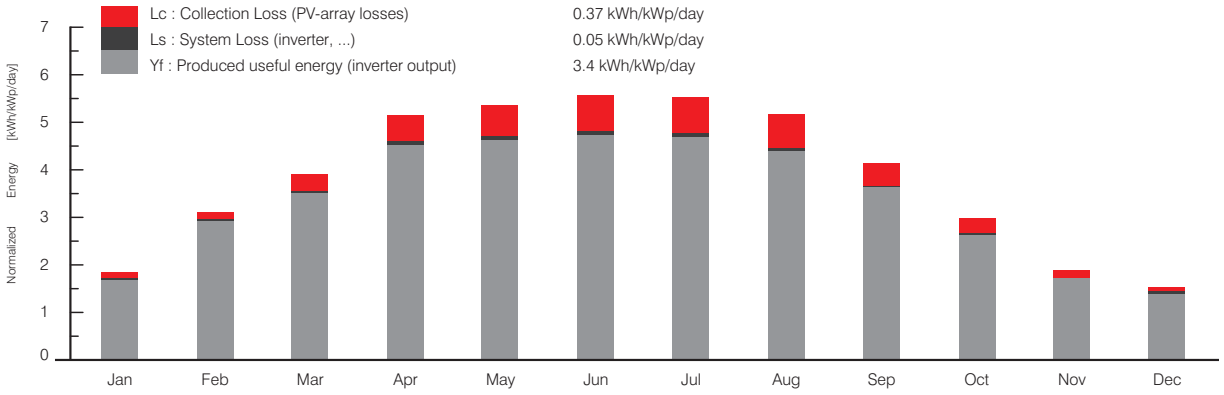
Simulation Variant : **1MW_Germany**

Main System Parameters	System Type	**No 3D Scene Defined, No Shadings**		
PV Field Orientation	Tilt	38°	Azimuth	0°
PV Modules	Model	JKM 350M-72-V	Pnom	350 Wp
PV Array	No. of Modules	2880	Pnom Total	**1008 kWp**
Inverter	Model	GW80K-MT	Pnom	80.0 kW ac
Inverter Pack	No.of Units	12.0	Pnom Total	**960 kW ac**
User's Needs	Unlimited Load (Grid)			

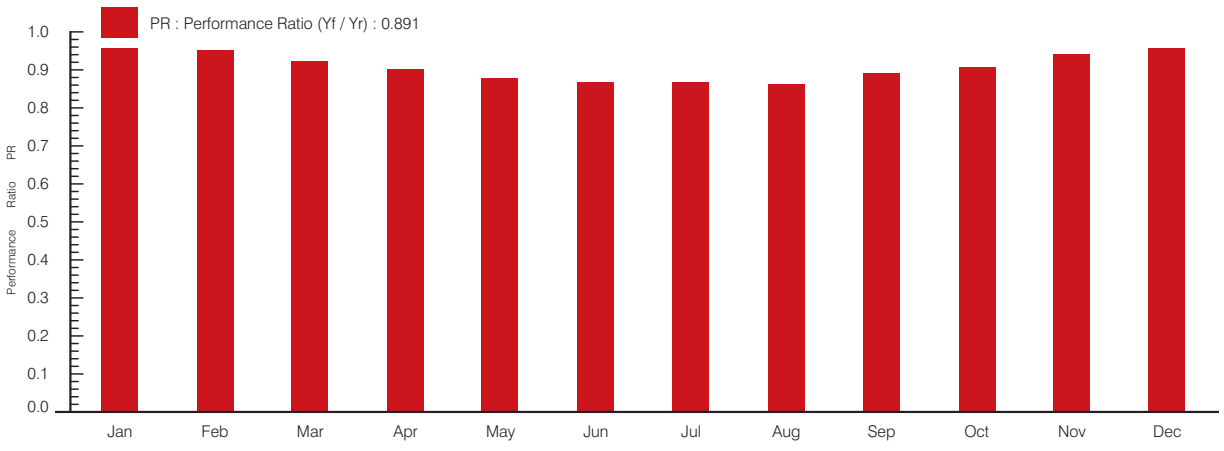
Main Simulation Results

System Production	**Produced Energy**	**1250 MWh/year**	Specific Prod.	1240 kWh/kWp/year
	Performance Ratio PR	89.07%		

Normalized productions (per installed kWp): Nominal power 1008 kWp



Performance Ratio PR



* This report shows the total energy produced less all cumulative losses. This project achieved 5% of DC oversizing.

* The GW80K-MT can support 50% DC oversizing.

5MWp Solar Power Plant Solution

Project Information

Project Location: Munich / GERMANY
PV Panel: 430 Wp Bifacial
Inverter: GW100K-HT GoodWe three phase commercial inverter (400V Output)
Installed DC Capacity: 15.200 pcs x 0.43 kWp = 6536 kWp
Installed Rated AC Capacity: 50 pcs x 100 kW = 5000 kW
DC / AC Ratio: 1.30

* GoodWe HT series inverter has 30-50% DC oversize ability. In that project 30% DC oversize applied considering the strong level of irradiation of Germany.

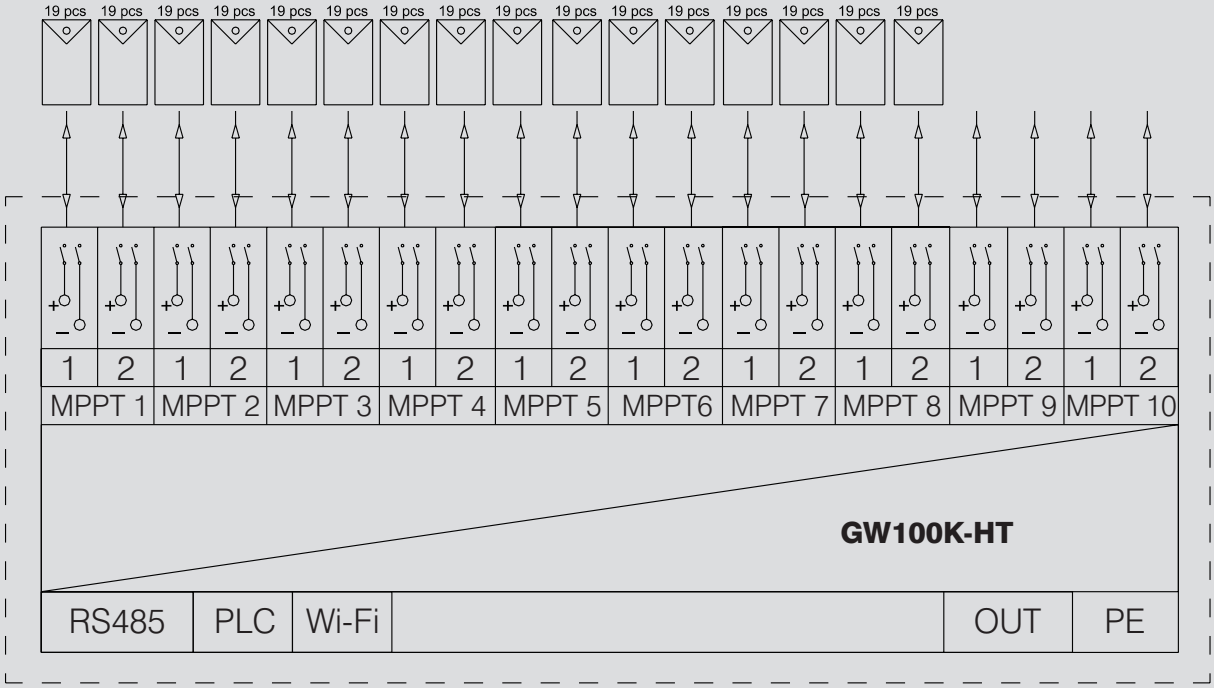
Project Components

No.	Material	Description	Quantity
1	PV Panel	430 Wp Monocrystalline	15.200
2	Inverter	GoodWe GW100K-HT	50
3	Construction Material	Rooftop Supporting System, preferably aluminum	1 Package
4	DC Cable	1x6 mm^2	65.000 mt.
5	AC Cable	4x35 mm^2	153.000 mt.
6	AC Board	5 leakage current protection, 5 Sub Breaker, 1 SPD, 1 Main switch	16
7	HV Building	Transformer, AC Main Board, Protection cells	1

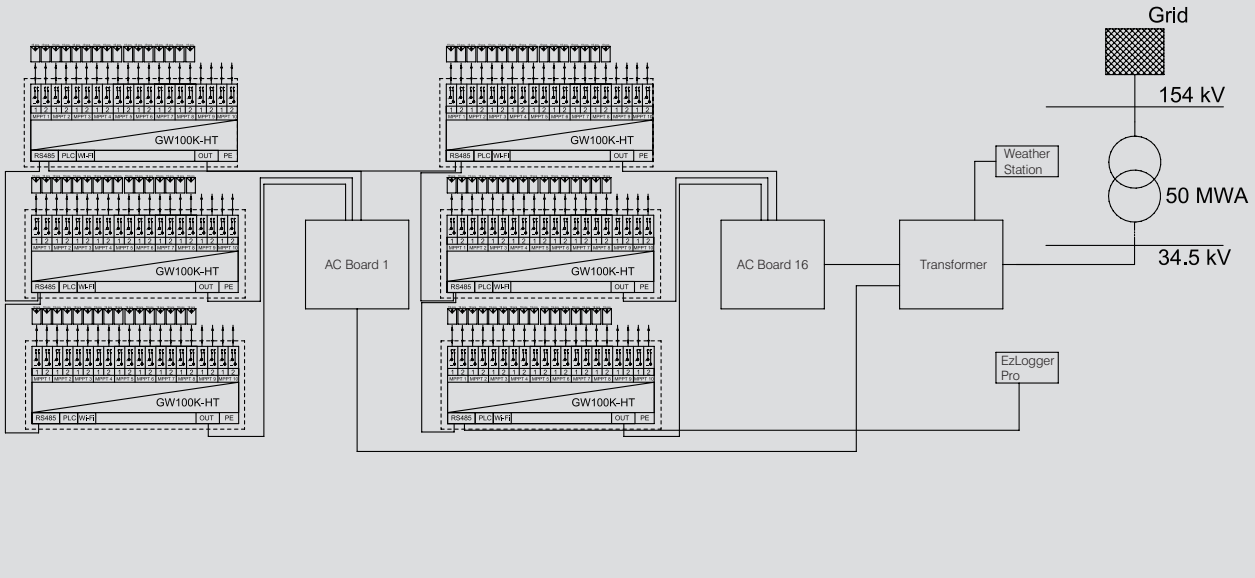
PV Panel Main Features

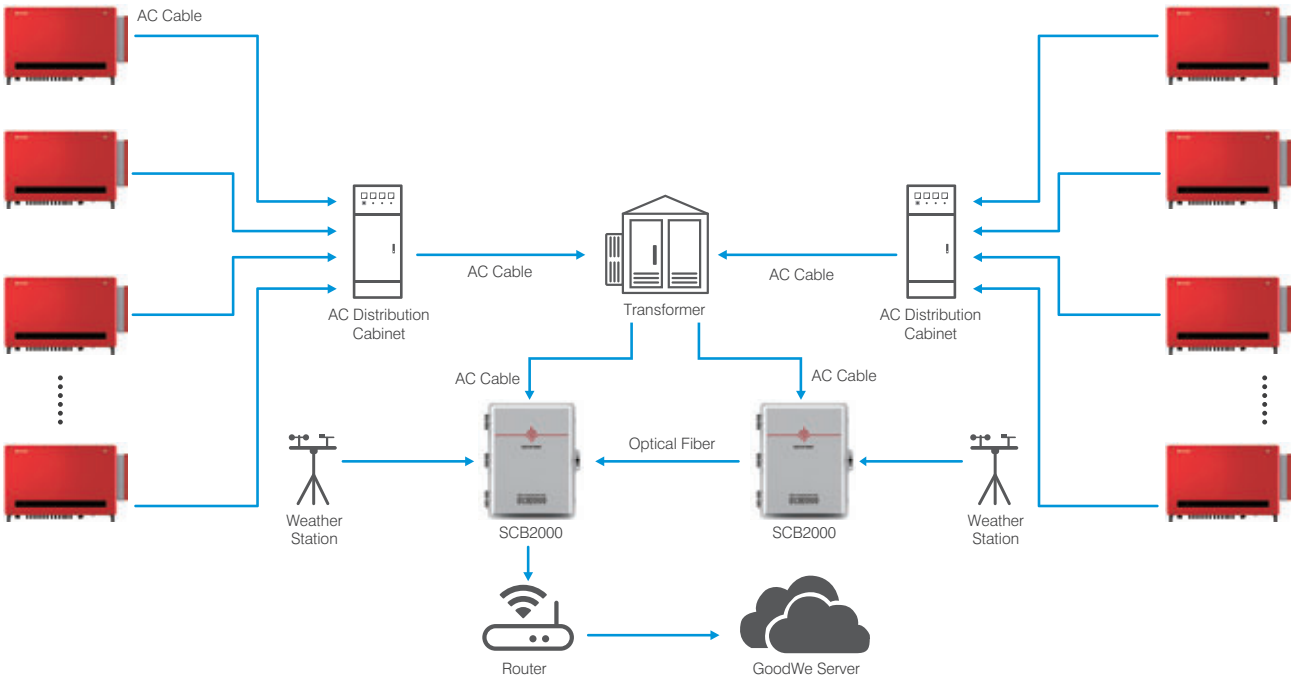
Maximum Power (Pmax)	430 Wp
Maximum Power Voltage (Vmp)	41.20 V
Maximum Power Current (Imp)	10.4 A
Open-circuit Voltage (Voc)	49.40 V
Size & Weight	2131×1052×35 mm 29.5 kg

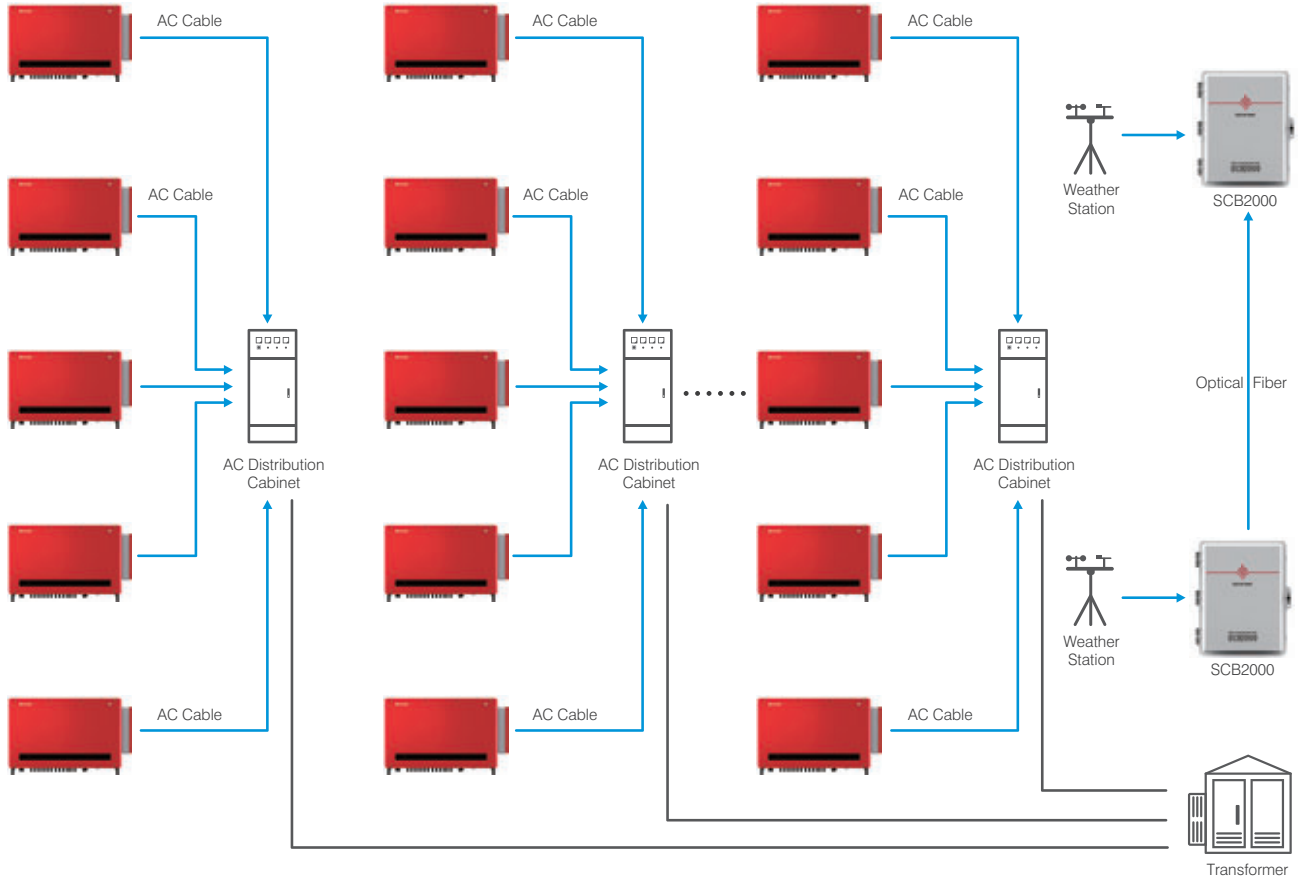
Cabling & Connections Diagram



* Illustration of connection diagram. To get higher yield we implied 19 pcs of PV Panels to 16 strings. There are 304 PV Panels installed in total per inverter, DC input power is 130.7 kWp. DC/AC ratio is 1.3.







* There are Ezlogger Pro and PLC board located inside of SCB2000 box. This communication box can support up to 30 inverters. For using more than 30 inverters, we can connect all SCB2000 boxes with Optical Fiber.

PV System Efficiency Report

Grid-Connected System: Main Results

Project : **5MW Project**

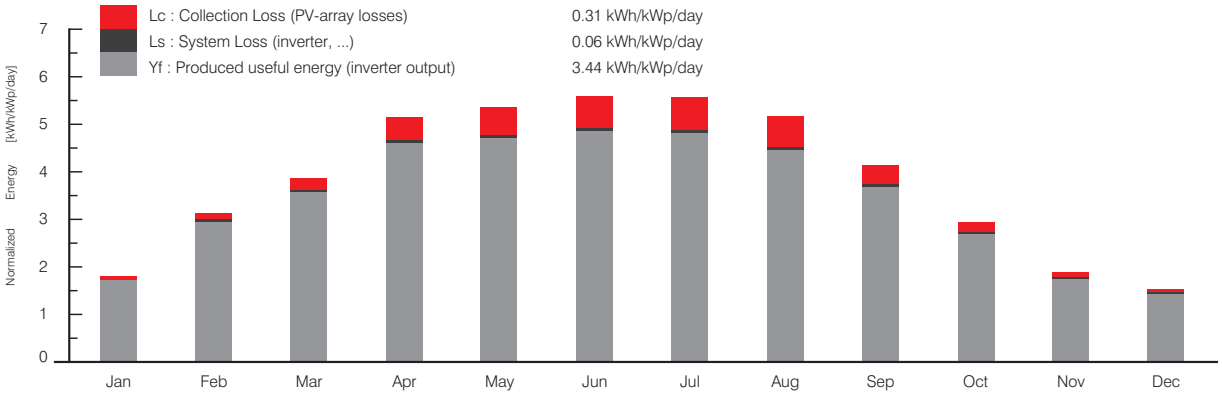
Simulation Variant : **New simulation variant**

Main System Parameters				
System Type		**No 3D Scene Defined, No Shadings**		
PV Field Orientation	Tilt	37°	Azimuth	0°
PV Modules	Model	LR4-72 HBD 430 M	Pnom	430 Wp
PV Array	No. of Modules	15200	Pnom Total	**6536 kWp**
Inverter	Model	GW100K-HT	Pnom	100 kW ac
Inverter Pack	No.of Units	50.0	Pnom Total	**5000 kW ac**
User's Needs	Unlimited Load (Grid)			

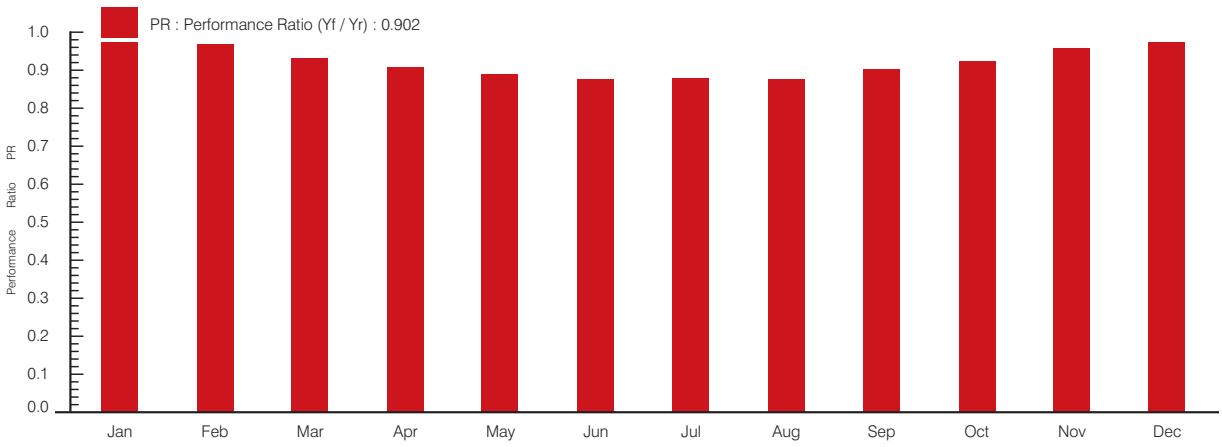
Main Simulation Results

System Production	**Produced Energy**	**8216 MWh/year**	Specific Prod.	1257 kWh/kWp/year
	Performance Ratio PR	90.22 %		

Normalized productions (per installed kWp): Nominal power 6536 kWp



Performance Ratio PR



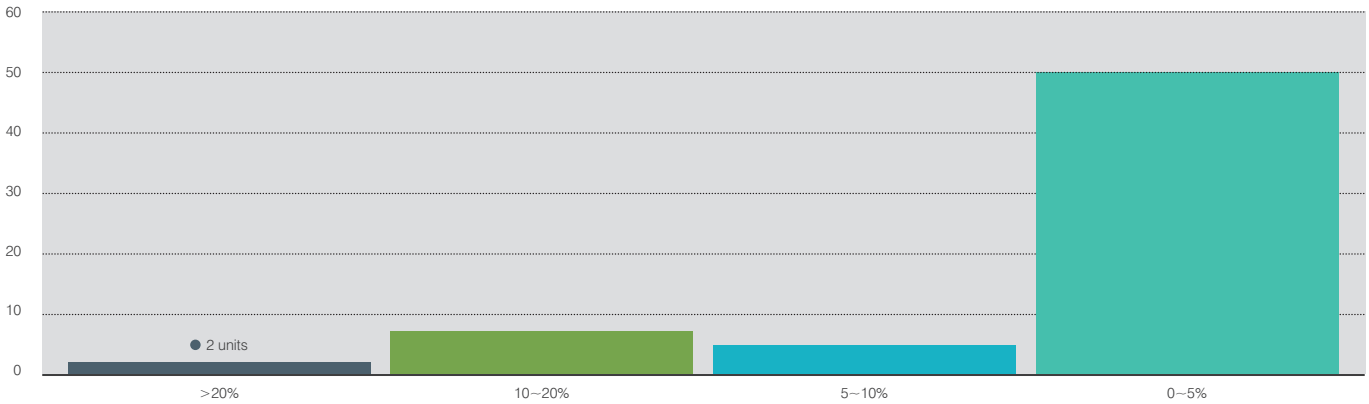
* This report shows that bifacial PV Panels produce more energy under good irradiation, and has more PR (Performance Ratio) than traditional systems.
* GW100K-HT can support 50% DC oversizing.

Smart Energy Management System

The Smart Energy Management System (SEMS) of GoodWe is an open protocol monitoring platform. It is designed to help operators to monitor a diverse range of PV plants operating at different locations simultaneously. SEMS carries extensive data processing, including the production of customized charts. Its system of notifications and maintenance functions helps the operators of PV assets to manage the generation of energy efficiently and comfortably, contributing to higher system yields.

String Level Monitoring

Deviation Analysis of Inverters



The high deviation rate indicates problems of the PV system. SEMS is able to select inverters with high deviation rate. Then by diagnosing the current of each string, users can check the corresponding panels and related installation components to find the root cause of the deviation.

>20%	10~20%	5~10%	0~5%

Inverter	Deviation Rate (%)	String Power (W)					
		String 1	String 2	String 3	String 4	String 5	String 6
1NB26	57.74	3618.12	3626.51	4049.023	3579.04	3678.52	3961.61
1NB52	57.75	3599.15	3596.02	3865.846	3528.8	3594.32	4124.26

Carousel Display of All Power Plants

Dynamic carousel display of all the plants under your account.

Smart Report Generation

Report Generation & Customized Data Analysis

Precise and comprehensive detection & evaluation of plant data

The content and design of the reports can be adjusted to suit individual requirements. In addition to the standard report, a report generator is also available.

Multilingual System

SEMS portal is a multilingual site. It offers as many as nine languages, including English, Germany, Dutch, Spanish, Portuguese, Czech, Turkish, Korean and Arabic. With the popularity of GoodWe inverters all around the world, more language versions of SEMS will be available.

Intelligent Warning and Troubleshooting

Lower O&M Cost:

Full visibility of system performance & remote troubleshooting

Optical Fiber Ring Solution

Maintaining a stable data transfer across long distances ranks high among the priorities. GoodWe has come up with a solution based on the integration of an optical fiber ring, in which the data transfer process and its speed remains undisrupted and reliable even when a communication node is broken. All these benefits make this an optimal solution for C&I scenarios.

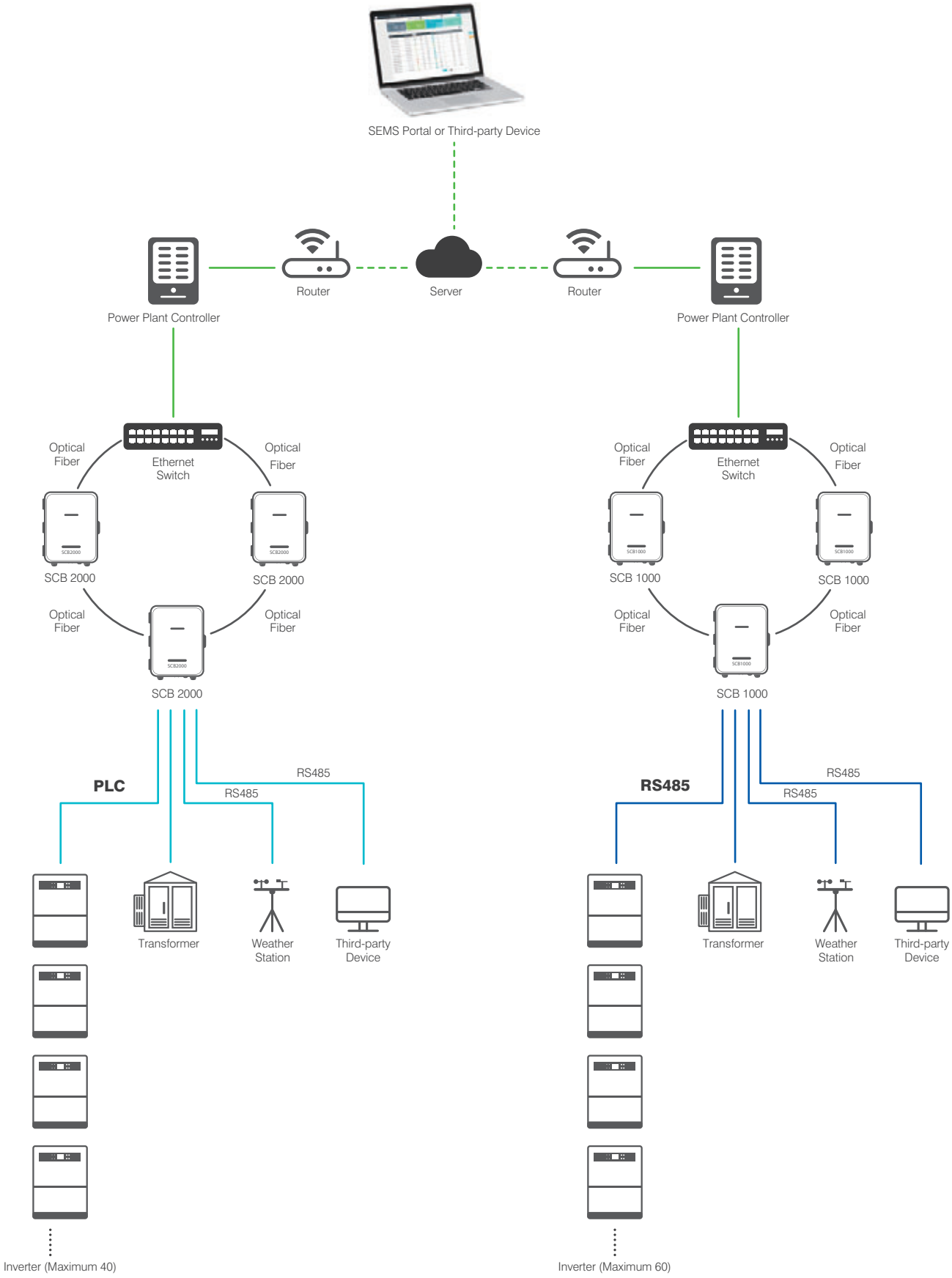
Advantages

- Provides the most solid basis for a reliable communication
- Long distance data transfer
- Economical

Solution Elements

The integration of the ring solution is possible only with inverters featuring RS485 or Power Line Communications (PLC). This solution is executed through the GoodWe Smart Communication Box 1000 (SCB1000) or Solar Communication Box 2000 (SCB 2000).

Solution Design



The SCB1000 communicates with the inverter through RS485. Meanwhile, the SCB2000 establishes communication with the inverter through the PLC.

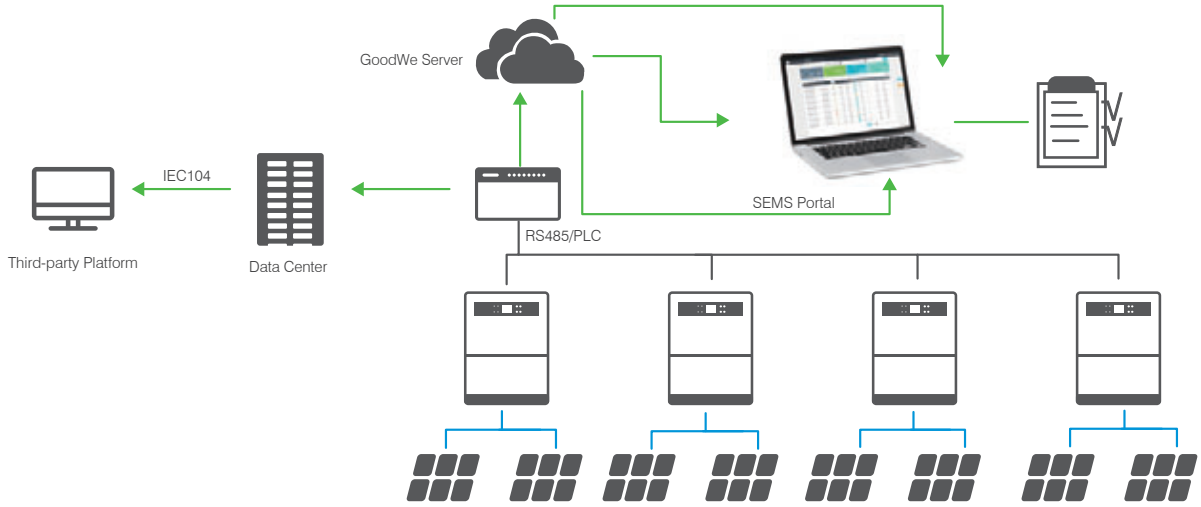
Multi-scenario Monitoring Solution

There are many ways of monitoring a PV system and displaying the data generated. This kind of information helps users to gain a better understanding of the operation of their solar plants. The compatibility of the GoodWe inverters with multiple standard protocols such as SUNSPEC, IEC 104 and Modbus RTU and their adaptability to third-party monitoring and control platform such as SCADA, are one of the many reasons that make them a perfect fit for a great number of C&I scenarios.

Advantages

- Stable data transfer
- Compatible with third party devices & platforms
- Enhanced data security

Solution Design



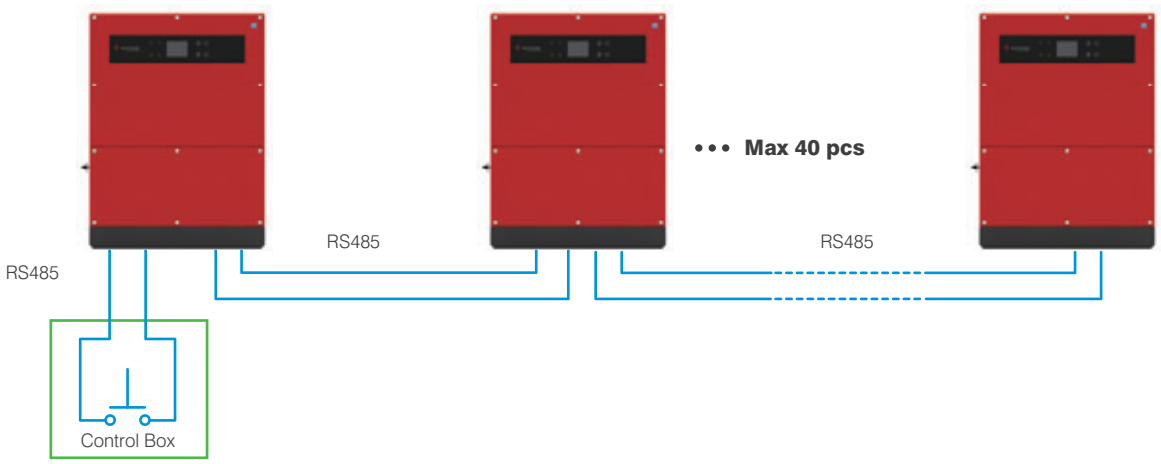
Remote Shutdown Solution

The remote shutdown function is a critical protection primarily aimed at ensuring the integrity of the PV system under situations of extreme emergency, such as fire hazards. In Commercial & Industrial PV systems, it helps operators to enhance and consolidate the system control and maintain the comprehensive safety under challenging environments and conditions. GoodWe is pleased to introduce its Remote Shutdown Solution.

Key Advantages

- Easy Installation
- 1km Range
- Swift Response (≤500ms)

Solution Design



Solar + Diesel Generator Solution

GoodWe is pleased to introduce the Solar + Diesel Generator Solution. In the occurrence of grid failure, a diesel generator can be utilized as an alternative source of energy, supplying the power missing from the public grid and allowing the grid-connected PV systems to keep powering the loads of the system. The addition of a diesel generator brings the extra benefit of maximizing the use of the solar energy, helping as well to effectively reduce the electricity costs. This is an optimal solution for environments characterized by an unreliable grid operation.

Advantages

- Automatic Switch
- Quick Recovery
- Smooth Operation

DEIF Controller Integration

For this kind of scenario, the C&I inverter of the GoodWe MT Series can be configured to coordinate with the DEIF Smart Power Controller Solution in order to automatically switch on/off the diesel generator according to the local circumstances and the user requirements.

Solution Elements

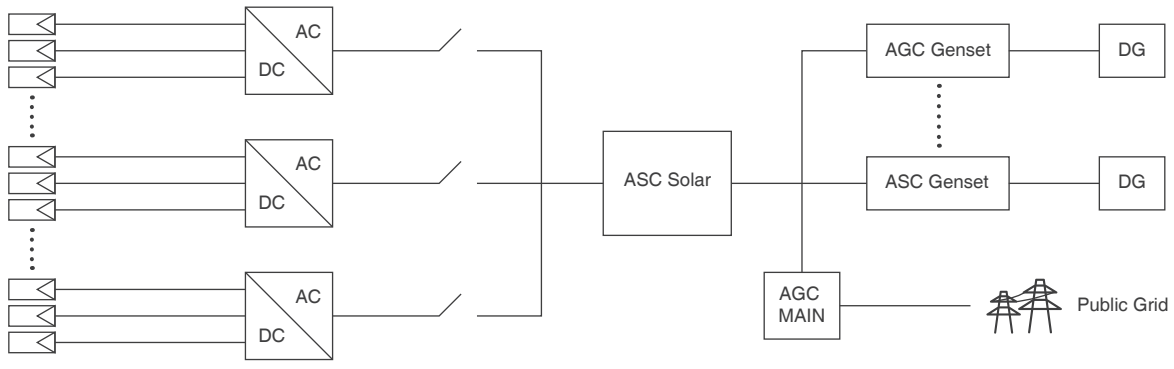
GoodWe MT Solar Inverter

Diesel Generator

Smart Controller

Solar + DG Integration Scenario

Diagram of " Solar + DG " System



Please approach GoodWe for all questions related to the compatibility of this arrangement with other series of GoodWe inverters. For specific questions related to the controller integration on this scenario, please liaise directly with the manufacturer DEIF.

Export Power Limit Solution

The Export Power Limit function is a critical tool of modern PV systems and its purpose is to help users to enhance and optimize self-consumption, helping them as well to comply with the local grid regulations. GoodWe has made an **Export Power Limit** Solution available to its customers, suitable for Commercial & Industrial projects of maximum capacity of 4.8MW.

Key Advantages

- Convenient installation
- Easy configuration
- Customizable export power limit to either zero or designated value

Solution Elements

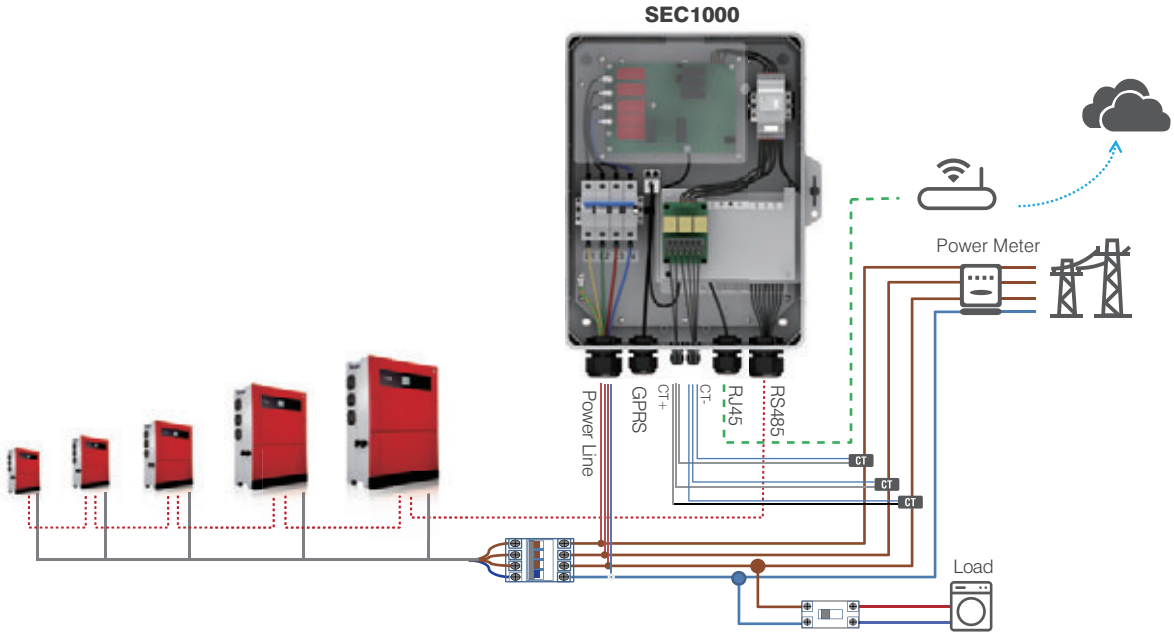
SEC1000

This solution requires the utilization of a GoodWe Smart Energy Controller 1000 (SEC1000). This device executes real-time data collection and analysis. In addition, it also helps to achieve an optimal allocation of the PV system resources.

Additional Benefits

This solution supports the smooth operation of additional functions such as load consumption monitoring. The data generated by the system is accessible free of charge at the GoodWe Smart Energy Management System Portal (SEMS).

Solution Design



A single SEC1000 device can perform the export power limit function of as many as 60 inverters. The maximum communication coverage reaches up to 1000 meters.

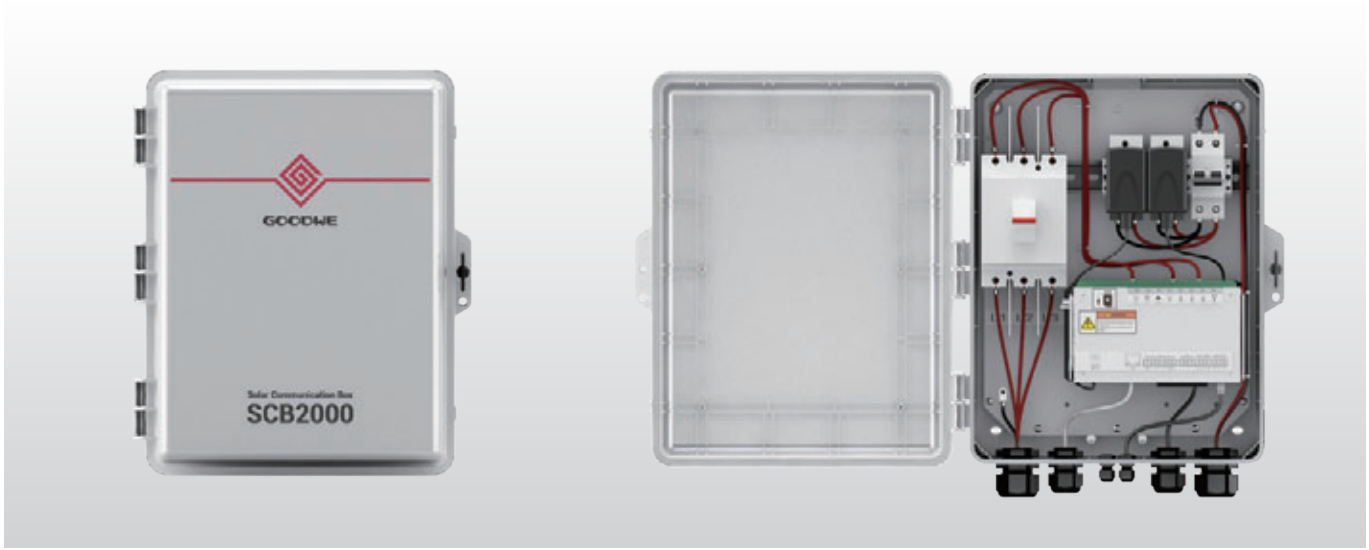
SEC1000 / SEC1000S

The SEC (Smart Energy Controller) is composed of GoodWe's three-phase meter and control board. It can be connected with SEMS to control and manage the performance of inverters in each string. SEC1000 is for monitoring, export power control and reactive power compensation, while SEC1000S is for export power control and ET Series inverter parallel control (up to 10 units). Small box, mighty functions!

Technical Data	SEC1000 (On-grid)	SEC1000S (Storage)
Input Voltage Range (V)	Phase Voltage: AC 60V～280V	
	Line Voltage: AC 100V～480V	
AC Input	3L/N/PE or 3L/PE	
Input Voltage Frequency	50Hz/60Hz	
Input Current Range	5A(Max.)	
Rated Power Consumption	＜10W	
Communication Mode with Inverter	RS485	
Maximum Distance for Controlling Inverter	1000m (Using the mode of shielded twisted pair)	
Maximum Number of Inverters in Controlling	60 pcs	10 pcs
Communication Mode with Terminals	LAN or GPRS	NA
Firmware	On-grid FW	Storage FW
Operating Temperature Range (°C)	-25～60	
Relative Humidity	0～100%	
Level of Protection	IP65	
Size (L*W*H mm)	420×320×131mm	
Weight (Kg)	4Kg	

SCB2000

The SCB2000 (Solar Communication Box) is integrated by the following component sections: PLC communication board, data collector Ezlogger Pro board, GPRS module (optional), fiber ring network switch (optional) and three-phase/single-phase switch.



Technical Data	With Optical	Without Optical
Power supply Input Voltage Range (V)	110-240V 50Hz/60Hz	110-240V 50Hz/60Hz
Rated Power Consumption	≤18W	≤16W
Communication Mode with Inverter	PLC	PLC
Voltage Range of Input AC Line	342~690V	342~690V
Max Length to Inverter	1000m	1000m
Max Quantity of Inverter Connected	30	30
Communication Mode with Server/Cloud	LAN/SC (can form optical fiber ring network) / GPRS	LAN/GPRS
Max Length to Server/Cloud	LAN: 100m; optical fiber: 20km	LAN: 100m
RS485	It can be connected to third-party devices such as environmental monitors	
Other Interface	USB, SD Card	USB, SD Card
Operating Temperature Range (°C)	-25~60	-25~60
Relative Humidity	0~100%	0~100%
Protection Degree	IP65	IP65
Size (Width*Height*Depth mm)	420*320*150	420*320*150
Weight (Kg)	10.5	10

SDT G2 Series Datasheet

Technical Data	GW17KT-DT	GW20KT-DT	GW25KT-DT
PV String Input Data			
Max. DC Input Power (Wp)	25500	30000	37500
Max. DC Input Voltage (V)	1100	1100	1100
MPPT Range (V)	200~950	200~950	200~950
Starting Voltage (V)	180	180	180
Min. Feed-in Voltage (V)	210	210	210
Nominal DC Input Voltage (V)	620	620	600
Max. Input Current (A)	25/25	25/25	37.5/25
Max. Short Current (A)	31.2/31.2	31.2/31.2	46.8/31.2
No. of MPP Trackers	2	2	2
No. of Input Strings per Tracker	2/2	2/2	3/2
AC Output Data			
Nominal Output Power (W)	17000	20000	25000
Max. Output Apparent Power (VA)	19000*1	22000*1	27500*1
Nominal Output Voltage (V)		400, 3L/N/PE	
Nominal Ouput Frequency (Hz)	50/60	50/60	50/60
Max. Output Current (A)	28.8	31.9	40.8
Output Power Factor		~1 (Adjustable from 0.8 leading to 0.8 lagging)	
Output THDi (@Nominal Output)	<3%	<3%	<3%
Efficiency			
Max. Efficiency	98.4%	98.4%	98.4%
European Efficiency	>97.7%	>97.7%	>97.7%
Protection			
Anti-Islanding Protection	Integrated	Integrated	Integrated
Input Reverse Polarity Protection	Integrated	Integrated	Integrated
Insulation Resistor Detection	Integrated	Integrated	Integrated
DC Surge Protection		Type III (Type II optional)	
AC Surge Protection		Type III	
Residual Current Monitoring Unit	Integrated	Integrated	Integrated
Output Over Current Protection	Integrated	Integrated	Integrated
Output Short Protection	Integrated	Integrated	Integrated
Output Over Voltage Protection	Integrated	Integrated	Integrated
General Data			
Operating Temperature Range (°C)	-30~60	-30~60	-30~60
Relative Humidity	0~100%	0~100%	0~100%
Operating Altitude (m)	≤4000	≤4000	≤4000
Cooling	Fan Cooling	Fan Cooling	Fan Cooling
User Interface		LCD & LED	
Communication		WiFi or LAN or RS485(Optional)	
Weight (kg)	25	25	25
Size (Width*Height*Depth mm)	415*511*175	415*511*175	415*511*175
Protection Degree	IP65	IP65	IP65
Night Self Consumption (W)	<1	<1	<1
Topology		Transformerless	

*1: For Belgium Max. Output Apparent Power (VA): GW17KT-DT is 17000; GW20KT-DT is 20000; GW25KT-DT is 25000.
*: Please visit GoodWe website for the latest certificates.

LV SMT/SMT Series Datasheet

Technical Data	GW12KLV-MT	GW15KLV-MT	GW20KLV-MT	GW25K-MT	GW30K-MT	GW36K-MT
PV String Input Data						
Max. DC Input Power (Wp)	15600	19500	26000	32500	39000	42900
Max. DC Input Voltage (V)	800	800	800	1100	1100	1100
MPPT Range (V)	200~650	200~650	200~650	200~950	200~950	200~950
Start-up Voltage (V)	180	180	180	180	180	180
Nominal DC Input Voltage (V)	370	370	370	600	600	600
Max. Input Current (A)	25/25/25	25/25/25	25/25/25	25/25/25	25/25/25	25/25/25
Max. Short Current (A)	31.3/31.3/31.3/31.3	31.3/31.3/31.3/31.3	31.3/31.3/31.3/31.3	31.3/31.3/31.3	31.3/31.3/31.3	31.3/31.3/31.3
No. of MPP Trackers	3	3	3	3	3	3
No. of Input Strings per Tracker	2/2/2	2/2/2	2/2/2	2/2/2	2/2/2	2/2/2
AC Output Data						
Nominal Output Power (W)	12000	15000	20700	25000	30000	36000*[1]
Max. Output Power (W)	11300@208VAC 12000@220VAC 13100@240VAC	14400@208VAC 15000@220VAC 16600@240VAC	19600@208VAC 20700@220VAC 22600@240VAC	27500*[2]	33000*[2]	36000*[2]
Max. Output Apparent Power (VA)	13100	16600	22600	27500*[3]	33000*[3]	36000*[3]
Nominal Output Voltage (V)	150-300	150-300	150-300	400, 3L/N/PE or 3L/PE		
Nominal Output Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60
Max. Output Current (A)	31.5	40	54.5	40	48	53.3
Output Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)					
Output THDi (@Nominal Output)	<3%	<3%	<3%	<3%	<3%	<3%
Efficiency						
Max. Efficiency	98.7%	98.7%	98.8%	98.7%	98.8%	98.8%
European Efficiency	>98.4%	>98.5%	>98.5%	>98.4%	>98.5%	>98.5%
Protection						
Anti-islanding Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Input Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
PV String Current Monitoring	-	-	-	Integrated	Integrated	Integrated
Anti-PID Function for Module	-	-	-	Optional	Optional	Optional
Insulation Resistor Detection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
DC Surge Protection	Type III (Type II optional)					
AC Surge Protection	Type III (Type II optional)					
Residual Current Monitoring Unit	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Output Over Current Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Output Short Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Output Over Voltage Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
AFCI	Optional	Optional	Optional	Optional	Optional	Optional
Terminal Temperature Detection	Optional	Optional	Optional	Optional	Optional	Optional
General Data						
Operating Temperature Range (°C)	-30~60	-30~60	-30~60	-30~60	-30~60	-30~60
Relative Humidity	0~100%	0~100%	0~100%	0~100%	0~100%	0~100%
Operating Altitude (m)	≤3000	≤3000	≤3000	≤3000	≤3000	≤3000
Cooling	Fan Cooling	Fan Cooling	Fan Cooling	Fan Cooling	Fan Cooling	Fan Cooling
User Interface	LCD & LED or APP & LED					
Communication	RS485 or WiFi or GPRS or PLC					
Weight (kg)	40	40	40	40	40	40
Size (Width*Height*Depth mm)	480*590*200	480*590*200	480*590*200	480*590*200	480*590*200	480*590*200
Protection Degree	IP65	IP65	IP65	IP65	IP65	IP65
Night Self Consumption (W)	<1	<1	<1	<1	<1	<1
Topology	Transformerless					

*[1]: 33kW for Italy,36kW for other countries.
*[2]: For Belgium Max. Output Power (W): GW25K-MT is 25000; GW30K-MT is 30000; GW36K-MT is 36000.
*[3]: For Belgium Max. Output Apparent Power (VA): GW25K-MT is 25000; GW30K-MT is 30000; GW36K-MT is 36000.
*: Please visit GoodWe website for the latest certificates.

LV MT/MT Series Datasheet

Technical Data	GW30KLV-MT	GW35KLV-MT	GW50KLV-MT	GW50KN-MT	GW60KN-MT	GW50KBF-MT
DC Input Data						
Max. PV Power (W)	54000	63000	90000	65000	80000	65000
Max. DC Input Voltage (V)	800	800	800	1100	1100	1100
MPPT Range (V)	200~650	200~650	200~650	200~1000	200~1000	200~1000
Starting Voltage (V)	200	200	200	200	200	200
Min. Feed-in Voltage (V)	210	210	210	210	210	210
Nominal DC Input Voltage (V)	370	370	370	620	620	620
Max. Input Current (A)	33/33/22/22	33/33/33/33	44/44/44/44	33/33/22/22	33/33/33/33	30/30/30/30
Max. Short Current (A)	41.5/41.5/27.5/27.5	41.5/41.5/41.5/41.5	55/55/55/55	41.5/41.5/27.5/27.5	41.5/41.5/41.5/41.5	37.5/37.5/37.5/37.5
No. of MPP Trackers	4	4	4	4	4	4
No. of Input Strings per Tracker	3/3/2/2	3/3/3/3	4/4/4/4	3/3/2/2	3/3/3/3	2/2/2/2
AC Output Data						
Nominal Output Power (W)	30000	36000	50000	50000	60000	50000
Max. Output Power (W)	28800@208VAC 30000@220VAC 33000@240VAC	34500@208VAC 36000@220VAC 39900@240VAC	47300@208VAC 50000@220VAC 55000@240VAC	55000;57500 @415Vac*[1]	66000;69000 @415Vac*[1]	55000;57500 @415Vac*[1]
Max. Output Apparent Power (VA)	33000	39900	55000	55000;57500 @415Vac*[2]	66000;69000 @415Vac*[2]	55000;57500 @415Vac*[2]
Nominal Output Voltage (V)	150-300	150-300	150-300	400, default 3L+N+PE , 3L+PE optional in settings		
Nominal Ouput Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60
Max. Output Current (A)	80	96	133	80	96	80
Output Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)					
Output THDi (@Nominal Output)	<3%	<3%	<3%	<3%	<3%	<3%
Efficiency						
Max. Efficiency	98.7%	98.8%	98.7%	98.7%	98.8%	98.8%
European Efficiency	98.3%	98.5%	98.3%	98.3%	98.5%	98.3%
Protection						
PV String Current Monitoring	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Anti-Islanding Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Input Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Insulation monitoring	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
DC fuse	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Anti-PID Function for Module	Optional	Optional	Optional	Optional	Optional	Optional
DC SPD Protection	Integrated (Type II)					
AC SPD Protection	Integrated (Type II)					
Residual Current Monitoring Unit	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
AC Over Current Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
AC Short Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
AC Over Voltage Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
General Data						
Ambient Temperature Range (°C)	-30~60	-30~60	-30~60	-30~60	-30~60	-30~60
Relative Humidity	0~100%	0~100%	0~100%	0~100%	0~100%	0~100%
Operating Altitude (m)	≤4000	≤4000	≤4000	≤4000	≤4000	≤4000
Cooling	Fan Cooling	Fan Cooling	Fan Cooling	Fan Cooling	Fan Cooling	Fan Cooling
Display	LCD or WiFi+APP		LED, WiFi+APP	LCD or WiFi+APP		
Communication	RS485 or WiFi		RS485 & WiFi, PLC(Optional)	RS485 or WiFi or PLC		
Weight (kg)	59	64	70	59	64	60
Dimension (Width*Height*Depth mm)	586*788*264	586*788*264	586*788*267	586*788*264	586*788*264	586*788*264
Protection Degree	IP65	IP65	IP65	IP65	IP65	IP65
Night Self Consumption (W)	<1	<1	<1	<1	<1	<1
Topology	Transformerless					

*[1]: For Belgium Max. Output Power (W): GW50KN-MT is 50000; GW60KN-MT is 60000; GW50KBF-MT is 50000.
*[2]: For Belgium Max. Output Apparent Power (VA): GW50KN-MT is 50000; GW60KN-MT is 60000; GW50KBF-MT is 50000.
*: Please visit GoodWe website for the latest certificates.

MT Series Datasheet

Technical Data	GW60KBF-MT	GW75KBF-MT	GW80KBF-MT	GW70KHV-MT	GW80KHV-MT	GW75K-MT	GW80K-MT
DC Input Data							
Max. PV Power (W)	80000	97500	104000	91000	120000	112500	120000
Max. DC Input Voltage (V)	1100	1100	1100	1100	1100	1100	1100
MPPT Range (V)	200~1000	200~1000	200~1000	200~1000	200~1000	200~1000	200~1000
Starting Voltage (V)	200	200	200	200	200	200	200
Min. Feed-in Voltage (V)	210	210	210	210	210	210	210
Nominal DC Input Voltage (V)	620	750	800	750	800	600	620
Max. Input Current (A)	44/44/44/44	44/44/44/44	39/39/39/39	33/33/33/33	44/44/44/44	44/44/44/44	44/44/44/44
Max. Short Current (A)	55/55/55/55	55/55/55/55	54.8/54.8/54.8/54.8	41.5/41.5/41.5/41.5	55/55/55/55	55/55/55/55	55/55/55/55
No. of MPP Trackers	4	4	4	4	4	4	4
No. of Input Strings per Tracker	3/3/3/3	3/3/3/3	3/3/3/3	3/3/3/3	3/3/3/3	4/4/4/4(Standard) 3/3/3/3(Optional, Support bifacial module)	
AC Output Data							
Nominal Output Power (W)	60000	75000	80000	70000	80000	75000	80000
Max. Output Power (W)	66000;69000 @415Vac*[1]	82500*[1]	88000*[1]	77000*[1]	88000*[1]	75000	88000*[1]
Max. Output Apparent Power (VA)	66000;69000 @415Vac*[2]	82500*[2]	88000*[2]	77000*[2]	88000*[2]	75000	88000*[2]
Nominal Output Voltage (V)	400, default 3L+N+PE , 3L+PE optional in settings	500, 3L/PE	540, 3L/PE	500, 3L/PE	540, 3L/PE	380/415	400, default 3L+N+PE, 3L+PE optional in settings
Nominal Ouput Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Max. Output Current (A)	96	95.3	94.1	89	94.1	133	133
Output Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)						
Output THDi (@Nominal Output)	<3%	<3%	<3%	<3%	<3%	<3%	<3%
Efficiency							
Max. Efficiency	98.8%	99.0%	99.0%	99.0%	99.0%	98.8%	98.8%
European Efficiency	98.3%	98.4%	98.4%	98.4%	98.4%	98.3%	98.3%
Protection							
PV String Current Monitoring	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Anti-Islanding Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Input Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Insulation monitoring	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
DC fuse	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Anti-PID Function for Module	Optional	Optional	Optional	Optional	Optional	Optional	Optional
DC SPD Protection	Integrated (Type II)						
AC SPD Protection	Integrated (Type II)						
Residual Current Monitoring Unit	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
AC Over Current Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
AC Short Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
AC Over Voltage Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Humidity Monitoring	NA	NA	NA	NA	NA	Integrated	Integrated
General Data							
Ambient Temperature Range (℃)	-30~60	-30~60	-30~60	-30~60	-30~60	-30~60	-30~60
Relative Humidity	0~100%	0~100%	0~100%	0~100%	0~100%	0~100%	0~100%
Operating Altitude (m)	≤4000	≤4000	≤4000	≤4000	≤4000	≤4000	≤4000
Cooling	Fan Cooling	Fan Cooling	Fan Cooling	Fan Cooling	Fan Cooling	Fan Cooling	Fan Cooling
Display	LED, WiFi+APP			LCD or WIFI+APP	LED, WIFI+APP	LED, WIFI+APP	LED, WiFi+APP
Communication	RS485 or WIFI or PLC					RS485 & WiFi, PLC(Optional)	RS485 & WiFi, PLC(Optional)
Weight (kg)	65	65	65	60	65	70	70
Dimension (Width*Height*Depth mm)	586*788*267	586*788*267	586*788*267	586*788*264	586*788*264	586*788*267	586*788*267
Protection Degree	IP65	IP65	IP65	IP65	IP65	IP65	IP65
Night Self Consumption (W)	<1	<1	<1	<1	<1	<1	<1
Topology	Transformerless						

*[1]: For Belgium Max. Output Power (W): GW60KBF-MT is 60000; GW75KBF-MT is 75000; GW80KBF-MT is 80000; GW70KHV-MT is 70000; GW80KHV-MT is 80000; GW80K-MT is 80000.
*[2]: For Belgium Max. Output Apparent Power (VA): GW60KBF-MT is 60000; GW75KBF-MT is 75000; GW80KBF-MT is 80000; GW70KHV-MT is 70000; GW80KHV-MT is 80000; GW80K-MT is 80000.
*: Please visit GoodWe website for the latest certificates.

HT Series Datasheet

Technical Data	GW100K-HT	GW110K-HT	GW120K-HT	GW136K-HTH
PV String Input Data				
Max. DC Input Power (kW)	150	165	180	205
Max. DC Input Voltage (V)	1100	1100	1100	1100
MPPT Range (V)	180~1000	180~1000	180~1000	180~1000
Min. Start-up Voltage (V)	200	200	200	200
MPPT Range for Full Load (V)	470~850	470~850	470~850	620~850
Nominal DC Input Voltage (V)	600	600	600	750
Max. Input Current (A)	10*30A	10*30A	12*30A	12*30A
Max. Short Current (A)	10*45A	10*45A	12*45A	12*45A
No. of MPP Trackers	10	10	12	12
No. of Input Strings per Tracker	2	2	2	2
AC Output Data				
Nominal Output Power (kW)	100	110	120	136
Max. Output Power (kW)	110	121	132	150
Max. Output Apparent Power (kVA)	110	121	132	150
Nominal Output Voltage (V)	400, 3L/N/PE or 3L/PE	400, 3L/N/PE or 3L/PE	400, 3L/N/PE or 3L/PE	500V, 3L/PE
Nominal Ouput Frequency (Hz)	50/60	50/60	50/60	50/60
Max. Output Current (A)	167	175.5	191.3	173.2A
Output Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)			
Output THDi (@Nominal Output)	<3%	<3%	<3%	<3%
Efficiency				
Max. Efficiency	98.6%	98.6%	98.6%	99.0%
European Efficiency	98.3%	98.3%	98.3%	98.5%
Protection				
PV String Current Monitoring	Integrated	Integrated	Integrated	Integrated
Internal Humidity Detection	Integrated	Integrated	Integrated	Integrated
Insulation Resistor Detection	Integrated	Integrated	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated	Integrated
Input Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated
DC SPD Protection	Type II (Type I optional)			
AC SPD Protection	Type II (Type I optional)			
Output Over Current Protection	Integrated	Integrated	Integrated	Integrated
Output Short Protection	Integrated	Integrated	Integrated	Integrated
Output Over Voltage Protection	Integrated	Integrated	Integrated	Integrated
Arc Fault Protection	Optional	Optional	Optional	Optional
Emergency Power off	Optional	Optional	Optional	Optional
AC Terminal Over-temperature Protection	Optional	Optional	Optional	Optional
PID Recovery	Optional	Optional	Optional	Optional
General Data				
Operating Temperature Range (°C)	-30~60	-30~60	-30~60	-30~60
Relative Humidity	0~100%	0~100%	0~100%	0~100%
Operating Altitude (m)	≤4000	≤4000	≤4000	≤4000
Cooling	Fan Cooling	Fan Cooling	Fan Cooling	Fan Cooling
Display	LED(Standard), LCD(Optional) ,Bluetooth+APP			
Communication	RS485 or PLC or WiFi	RS485 or PLC or WiFi	RS485 or PLC or WiFi	RS485 or PLC or WiFi
Weight (kg)	93.5	93.5	98.5	98.5
Dimension (Width*Height*Depth mm)	1005*676*340	1005*676*340	1005*676*340	1005*676*340
Protection Degree	IP66	IP66	IP66	IP66
Night Self Consumption (W)	<2	<2	<2	<2
Topology	Transformerless			

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5MW Muan | South Korea

1MW **Kahramanmaraş | Turkey**

1MW **Kherson | Ukraine**

11MW **De Munt Emmeloord | Holland**

2MW

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