

iMars Series

Grid-tied Solar Inverter Catalog

Powered by Solar



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G83/G59 C10/11 TF3.2.1 PEA MEA VDE4105 LVRT



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Introduction

PV business is the most important part of INVT electric power products and service, which is committed to provide the most stable solar inverters to the world.

Based on the understanding of development and the requirements of solar grid-tied power generation system and following the stable, high efficient and maintenance-free product design concept, accumulated 14 years of R&D and application experience in the field of core inverter and control technology, INVT is extending its PV business and has launched the iMars series of grid-tied solar inverters successfully.

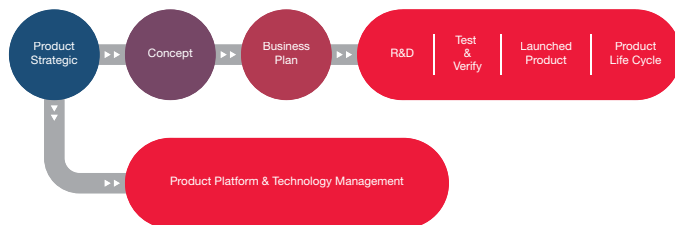
iMars series grid-tied solar inverters have a better performance on the aspect of product stability, efficient power transformation, low harmonics, safe power grid access and so on. They can be widely used in BIPV (house roof, office building roof and factory roof), BAPV (integrated residential buildings), commercial rooftop plants and on ground solar power plants, to provide customers with stable, safe and efficient renewable energy.

Up to now, INVT solar inverters have been widely used by over 85,000 happy customers in more than 60 countries.

How We Make the Differences

Reliable Product Design

- Experienced R&D team
- Professional Products R&D Process



- All components are verified by strict tests and key components supplied by international top brands
- Heat dissipation performance is ensured by system level thermal simulation for long service life
- 6 laboratory validations: device test, safety test, EMC test, functional performance test, environmental test and reliability test

Partners



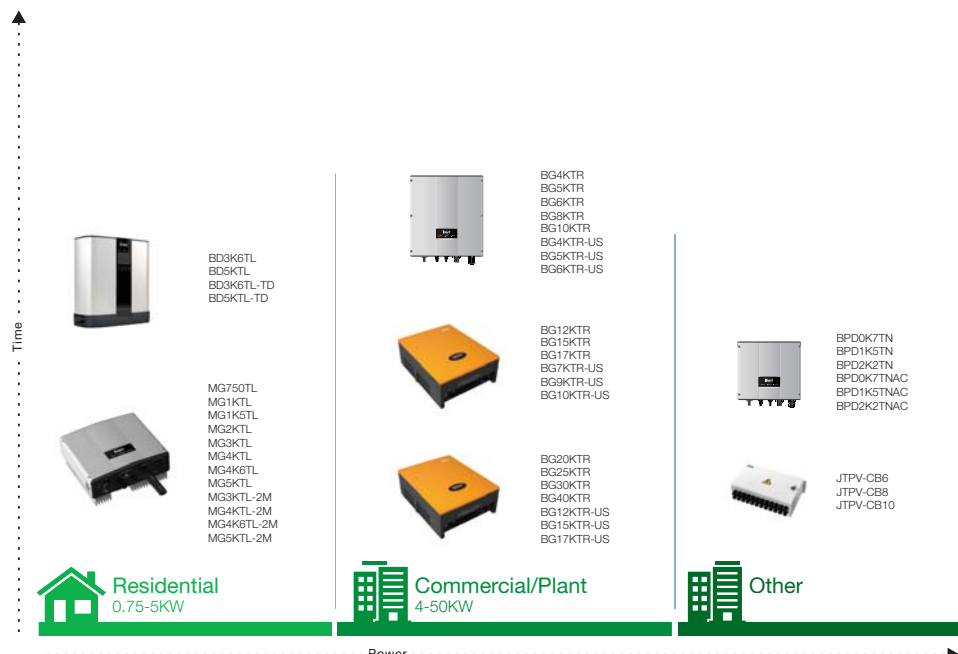
Strict Product Quality Control

- More than 14 years mature experience of manufacturing processes
- Integrated supply chain, comprehensive quality management system, efficient operation and lean production
- 9 steps of inspections and tests during production process

Guaranteed Usage

- All solar products have CHUBB products liability and product defects insurance
- 7x24 service
- 24 hours quick response

Product Family

iMars
InverterMonitoring
Products

Product



HMI

Data Webbox

Wifi200 / ENET200 / GPRS200

Software



WinExpert

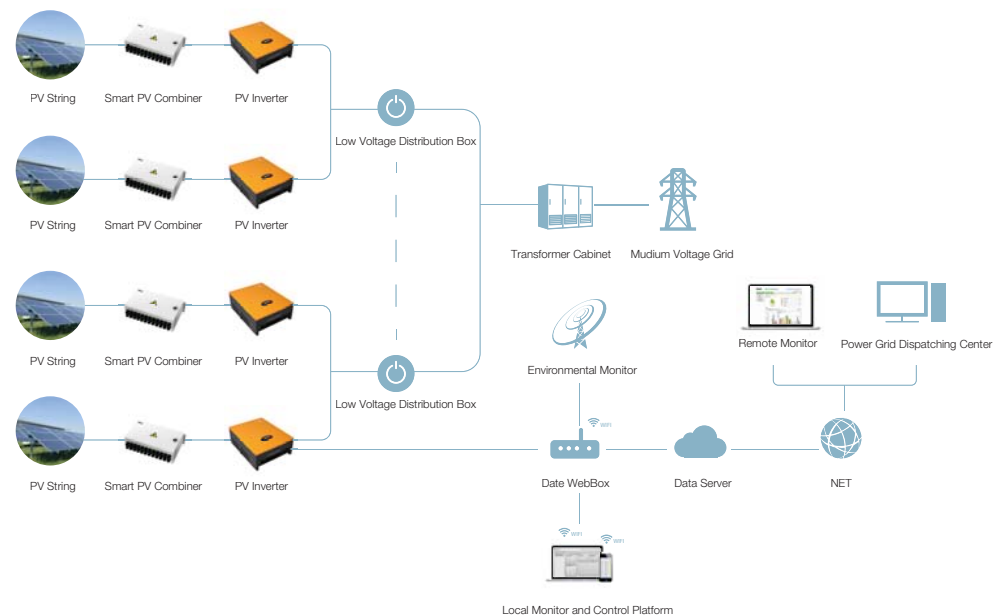
PhoneExpert

Platform



InfoExpert

Solution for PV Plant



Product Catalog

Model	Max. DC Voltage (V)	Max. Input Current (A)	Max. DC Input Power (W)	Rated DC Voltage (V)	MPPT
MG750TL	400	10x1	900	300	1
MG1KTL	450	10x1	1200	360	1
MG1K5TL		10x1	1700		1
MG2KTL		13x1	2200		1
MG3KTL	500	15x1	3200	360	1
MG4KTL	600	18x1	4600		2
MG4K6TL		18x1	5000		1
MG5KTL		20x1	5500		1
MG3KTL-2M		10x2	3300		1
MG4KTL-2M		10x2	4600		2
MG4K6TL-2M		11x2	5000		2
MG5KTL-2M		12x2	5500		2
BG4KTR	900	10x2	4200	580	2
BG5KTR		10x2	5200		2
BG6KTR		10x2	6300		2
BG8KTR	1000	14x2	8400	610	2
BG10KTR		19x2	10400		2
BG12KTR		19x2	12500		2
BG15KTR		21x2	15600		2
BG17KTR		23x2	17500		2
BG20KTR		25x2	20800		2
BG25KTR		30x2	26000		2
BG30KTR		33x2	31200		2
BG40KTR		33x2	40800		2
BD3K6TL	500	15x2	5200	380	2
BD5KTL			6600		2
BPD0K7TNAC	450	9x1	1100	300	1
BPD1K5TNAC		12x1	2250		1
BPD2K2TNAC			3300		1

iMars MG Series Single Phase Grid-tied Solar Inverters

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iMars MG Series

Single Phase Grid-tied Solar Inverter

MG750TL
MG1KTL
MG1K5TL
MG2KTL
MG3KTL
MG3KTL-2M



Description

MG series single phase inverter is a new generation of PV string inverter which has been developed by INVT for residential users. MG series inverters have the advantages of compact size, light weight, easy installation and maintenance, and are above all cost efficient.

Features

- The core technologies are from Germany.
- Software optimization for the power grid with much wider adaptability.
- Global integrated monitoring and management, supporting all kinds of portable mobile devices, HMI is optional.
- Minimum working voltage is 50V.
- Wider voltage range, lower starting voltage, higher conversion efficiency.
- Designed with latest thermal simulation technology for longer service life.

HMI Features

- Small and exquisite appearance.
- LCD display and easy to operate keyboard with multiple functions.
- Plug & play.

Specification

	MG750TL	MG1KTL	MG1K5TL	MG2KTL	MG3KTL	MG3KTL-2M
Input (DC)						
Max DC input power (W)	900	1200	1700	2200	3200	3300
Max DC Voltage (V)	400	450			500	600
Starting voltage /Min. Operation Voltage (V)	65/60	80/60	100/80	120/100		
Starting Power (W)	30					
MPPT Operating Voltage Range (V)	60–350	80–400	100–410	120-410	120-450	120-550
Number of MPPT/ String Per MPPT	1/1				1/2	2/1
MAX.DC Current (A) Per MPPT x Number of MPPT	10x1	10x1	10x1	13x1	15x1	10x2
DC Switch	Optional					
Output (AC)						
Max. Power (W)	800	1150	1650	2100	3100	3100
Max. AC Output Current (A)	3.6	4.5	6.5	9	13	16
AC Voltage Range	230/180–277Vac					
	According to VDE-AR-N4105, G83/2, C10/11, TF3.2.1, AS4777/3100, CQC					
Grid Frequency	50Hz (44–55Hz) / 60Hz (54–65Hz)					
	According to VDE-AR-N4105, G83/2, C10/11, TF3.2.1, AS4777/3100, CQC					
Power Factor	≥0.99 (Adjustable)					
THD	< 3% (At Rated Power)					
AC Connection	Single-phase (L, N, PE)					
System						
Cooling	Natural cooling					
Max. Efficiency	96.80%	96.90%	97.20%	97.20%	97.30%	97.90%
Euro-efficiency	95.95%	96.00%	96.10%	96.10%	96.50%	96.80%
MPPT Efficiency	99%					
Ingress Protection	IP65					
Consumption At Night	<1W					
Isolation Mode	Transformerless					
Operating Temperature	-25℃--+60℃, (derate after 45℃)					
Relative Humidity	0–95%, no condensation					
Protection	Over voltage protect ; DC insulation monitoring; DC Over current Protection; Grounding fault monitoring; Grid protection; island protection; Overheating protection; Overvoltage and short circuit protection etc.					
Display And Communication						
Display	LED Display (standard) /LCD (Optional)					
System Language	English, Chinese,German, Dutch					
Communication Mode	RS485 (Standard), WiFi, Ethernet (Optional)					
Mechanical Parameters						
Diminsion (H x W x D mm)	280x300x138					460x360x160
Weight (kg)	9.5					17
Installation	Wall mounting					
Others						
DC Terminal	MC4					
Certifications	VDE–AR–N4105, G83/2, C10/11, TF3.2.1, AS4777/3100, CQC, EN61000–6–1:4, EN61000–3–2:3, EN61000–11:12, IEC 62109–1:2010, LVRT					
Factory Warranty(Years)	5(standard) / 10, 15, 20 (optional)					

iMars MG Series Single Phase Grid-tied Solar Inverter

MG4KTL
MG4K6TL
MG5KTL
MG4KTL-2M
MG4K6TL-2M
MG5KTL-2M



Description

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Features

- The core technologies are from Germany.
- Software optimization for the power grid with much wider adaptability.
- Global integrated monitoring and management, supporting all kinds of portable mobile devices. HMI is optional.
- Wider voltage range, lower starting voltage, higher conversion efficiency.
- Designed with latest thermal simulation technology for longer service life.

HMI Features

- Small and exquisite appearance.
- LCD display and easy to operate keyboard with multiple functions.
- Plug & play.

Specification

	MG4KTL	MG4K6TL	MG5KTL	MG4KTL-2M	MG4K6TL-2M	MG5KTL-2M
Input (DC)						
Rated DC input power (W)	4000	4600	5000	4000	4600	5000
Max DC Voltage (V)	4500	5000	5500	4500	5000	5500
Starting Power (W)	50					
Starting Voltage /Min. Operation Voltage (V)	120/100					
MPPT Range (V)	120–550					
Number Of MPPT / String Per MPPT	1/2			2/1		
MAX.DC Current (A) Per MPPT x Number of MPPT	18x1	18x1	20x1	10x2	11x2	12x2
DC Switch	Optional					
Output (AC)						
Rated Power (W)	3680	4200	4600	3680	42000	4600
Max Power (W)	4000	4600	5000	4000	4600	5000
Max. AC Output Current (A)	19	21	23	16	21	23
AC Voltage Range	230/180–277Vac					
	According to VDE-AR-N4105, G83/2, G59/3, AS4777/3100, CQC					
Grid Frequency	50Hz (44–55Hz) / 60Hz (54–65Hz)					
	According to VDE-AR-N4105, G83/2, G59/3, AS4777/3100, CQC					
Power Factor	≥0.99 (Adjustable)					
THD	< 3% (At Rated Power)					
AC Connection	Single-phase (L, N, PE)					
System						
Cooling	Natural cooling					
Max. Efficiency	97.70%	97.70%	97.80%	97.90%	98.00%	98.00%
Euro-efficiency	96.50%	96.70%	96.80%	96.80%	96.80%	96.80%
MPPT Efficiency	99%					
Ingress Protection	IP65					
Consumption At Night	<1W					
Isolation Mode	Transformerless					
Operating Temperature	-25℃ ~+60℃, (derate after 45℃)					
Relative Humidity	0–95%, no condensation					
Protection	Over voltage protect; DC insulation monitoring; DC over current protection; monitoring; Grounding fault monitoring; island protection; Overheating protection; Electronic protection; Overvoltage and short circuit protection etc.					
Display And Communication						
Display	LED Display (standard) / LCD (Optional)					
System Language	English, Chinese, German, Dutch					
Communication Mode	RS485 (Standard), WiFi, Ethernet (Optional)					
Mechanical Parameters						
Diminsion (H x W x D mm)	405x360x150			460x360x150		
Weight (kg)	15			17		
Installation	Wall mounting					
Others						
DC Terminal	MC4					
Certifications	VDE–AR–N4105, G83/2, C10/11, TF3.2.1, AS4777/3100,CQCEN61000–6–1:4, EN61000–3–2:3, EN61000–11:12, IEC 62109–1:2010, LVRT					
Factory Warranty(Years)	5(standard) / 10, 15, 20 (optional)					

iMars BG Series Three Phase Grid-tied Solar Inverter

BG4KTR
BG5KTR
BG6KTR
BG8KTR
BG10KTR



Description

BG series three phase inverter is a new generation of PV string inverters which has been developed by INVT for residential and small commercial customers. This series adopts the latest technologies and combination of T type three level topology with SVPWM. This series also has many outstanding advantages such as compact size, light weight, easy installation and maintenance, and most of all, competitive prices.

It also provides flexible system configuration and monitoring solutions for household and commercial systems.

Features

- The core technologies are from Germany.
- Software optimization for the power grid with much wider adaptability.
- Global integrated monitoring and management, supporting all kinds of portable mobile devices, HMI is optional.

- Wider voltage range, lower starting voltage and higher conversion efficiency.
- Designed with latest thermal simulation technology for longer service life.

Specification

	BG4KTR	BG5KTR	BG6KTR	BG8KTR	BG10KTR
Input (DC)					
Max. DC Voltage (V)	900				
Staring Voltage /Min. Operation Voltage (V)	220/180				
Starting Power (W)	150				
MPPT Operating Voltage Range / Rated Voltage (V)	200-800/580				
Rated Power Voltage Range (V)	210-800	260-800	300-800	400-800	450 - 800
Number Of MPPT / String Per MPPT	2/2				
Max. DC Power (W)	4200	5200	6200	8300	10400
MAX.DC Current (A) Per MPPT x Number of MPPT	10x2	10x2	10x2	12x2	12x2
DC Switch	Integrated				
Output (AC)					
Rated Power (W)	4000	5000	6000	8000	10000
Max.AC Current (A)	7	8.5	10	13	15
Rated AC Votage Range	3/PE, 230/400V (320~460V) ;3/PE,220/380V (320~460V). According to VDE0126-1-1, VDE-AR-N4105, CQC, G83/2,C10/11, AS4777/3100.				
Grid Frequency	50Hz (47~51.5Hz) / 60Hz (57~61.5Hz) According to VDE0126-1-1, VDE-AR-N4105, CQC, G83/2,C10/11, AS4777/3100.				
Power Factor	-0.8~+0.8 (Adjustable)				
THD	< 3% (at rated power)				
AC Conection	Three-phase (L1, L2, L3, PE) or (L1, L2, L3, N, PE)				
System					
Cooling	Natural cooling			Smart Cooling	
Max. Efficiency	98.10%	98.10%	98.20%	98.20%	98.20%
Euro-efficiency	97.50%	97.60%	97.70%	97.70%	97.70%
MPPT Efficiency	99.9%				
Ingress Protection	IP65				
Consumption At Night	<0.5W				
Isolation Mode	Transformerless				
Operating Temperature	-25℃--+60℃ (derate after 45℃)				
Relative Humidity	0~95%, no condensation				
Protection	DC isolation monitoring, grounding fault monitoring, island protection, overvoltage and short circuit protection, etc				
Noise	< 30dB			< 50dB	
Display And Communication					
Display	2.1 inches LCD display, support backlit display				
System Language	English, Chinese, German, Dutch				
Communication Mode	RS485 (Standard), WiFi, Ethernet (Optional)				
Mechanical Parameters					
Diminon (H x W x D mm)	530x360x150			575x360x150	
Weight (kg)	20			23	
Installation	Wall mounting				
Others					
DC Terminal	MC4				
Certifications	VDE0126-1-1, VDE-AR-N4105, G59/3, C10/11, AS4777/3100, CQC EN61000-6-1:4, EN61000-11:12, IEC62109-1:2010, PEA, LVRT				
Factory Warranty(Years)	5(standard) / 10, 15, 20 (optional)				

iMars BG Series

Three Phase Grid-tied Solar Inverter

BG12KTR

BG15KTR

BG17KTR



Description

iMars BG series three-phase grid-tied solar inverters adopt the latest technologies combination of T type three level topology and SVPWM, provide flexible system configuration and monitoring solutions for household, commercial and power plant systems.

Features

- Dual MPPTs work independently and allow unbalanced input power. One MPPT maximum input is up to 60% of Max.DC power.
- High efficiency and stable performance at entire input voltage and output power range.
- Max. efficiency is up to 98.3%.
- Wide input voltage range gives more possibilities for accepting different string configuration and different type of PV modules.
- Bus capacitors consist of advanced film capacitors, designed with the latest thermal simulation technology for longer lifespan.
- Integrated intelligent DC combiner and surge protection improve system flexibility and lower the cost.
- 5V 200mA auxiliary DC power interface is optional for system expansion.
- AC output power is adjustable between 1-100%.
- Reactive power control and power factor adjustable: 0.8 leading ~ 0.8 lagging.
- RS485, Ethernet, WIFI communication modes are optional for realizing multiple monitoring solutions via PC, mobile phones, internet etc. platforms.

Specification

	BG12KTR		BG15KTR	BG17KTR
Input (DC)				
Max. DC Voltage (V)	1000			
Staring Voltage /Min. Operation Voltage (V)	200/180			
Starting Power (W)	150			
MPPT Operating Voltage Range (V) / Rated Voltage	180- 800/610V			
Rated Power Voltage Range (V)	350 - 800	400 - 800	400 - 800	
Number Of MPPT / String Per MPPT	2/3			
Max. DC Power (W)	12500	15600	17500	
Max. DC Current (A) Per MPPT x Number Of MPPT	19x2	21x2	23x2	
DC Switch	Integrated			
Output (AC)				
Rated Power (W)	12000	15000	17000	
Max. AC Current (A)	20	24	28	
Rated AC Voltage And Range	3/PE, 230/400V, (320–460V), 3/PE,220/380V, (320–460V) According to VDE0126-1-1, VDE-AR-N4105, CQC, G59/3,C10/11, AS4777/3100.			
Rated Grid Frequency And Range	50Hz (47–51.5Hz) / 60Hz (57–61.5Hz) According to VDE0126-1-1, VDE-AR-N4105, CQC, G59/3, C10/11, AS4777/3100.			
Power Factor	-0.8–+0.8 (Adjustable)			
THD	< 3% (at rated power)			
AC Connection	Three-phase (L1, L2, L3, PE) or (L1, L2, L3, N, PE)			
System				
Cooling	Smart cooling			
Max. Efficiency	98.20%	98.30%	98.30%	
Euro-efficiency	97.60%	97.80%	97.80%	
MPPT Efficiency	99.90%			
Ingress Protection	IP65			
Consumption At Night	<0.5W			
Isolation Mode	Transformerless			
Operating Temperature	-25℃--+60℃ (derate after 45℃)			
Relative Humidity	0–95%, no condensation			
Protection Functions	DC isolation monitoring, DC monitoring, grounding fault monitoring, grid monitoring, island protection, overvoltage and short circuit protection, etc			
Noise	< 50dB			
Display And Communication				
Display	3.5 inches LCD display, support backlit display			
System Language	English, Chinese, German, Dutch			
Key	Integrated			
Communication Mode	RS485 (Standard),WiFi, Ethernet (Optional)			
Mechanical Parameters				
Dimension (H x W x D mm)	610x480x204			
Weight (kg)	38			
Installation	Wall mounting			
Others				
DC Terminal	MC4			
Certifications	VDE0126-1-1, VDE-AR-N4105, CQC, G59/3, C10/11, AS4777/3100. EN61000-6-1:4, EN61000-11:12, IEC62109-1:2010, PEA, LVRT			
Factory Warranty(Years)	5(standard) / 10, 15, 20 (optional)			

iMars BG Series Three Phase Grid-tied Solar Inverter

BG20KTR
BG25KTR
BG30KTR
BG40KTR



Description

iMars BG series three-phase grid-tied solar inverters adopt the latest technologies combination of T type three level topology and SVPWM, provide flexible system configuration and monitoring solutions for household, commercial and power plant systems.

Features

- Dual MPPTs work independently and allow unbalanced input power. One MPPT maximum input is up to 60% of Max. DC power.
- High efficiency and stable performance at entire input voltage and output power range.
- Max. efficiency is up to 98.6%.
- Wide input voltage range gives more possibilities for accepting different string configuration and different type of PV modules.
- Bus capacitors consist of advanced film capacitors, designed with the latest thermal simulation technology for longer lifespan.
- Integrated intelligent DC combiner and surge protection improve system's flexibility and lower the cost.
- 5V 200mA auxiliary DC power interface is optional for system expansion.
- AC output power is adjustable between 1-100%.
- Reactive power control and power factor adjustable: 0.8 leading ~ 0.8 lagging.
- RS485, Ethernet, WIFI communication modes are optional for realizing multiple monitoring solutions via PC, mobile phones, internet etc. platforms.

Specification

	BG20KTR	BG25KTR	BG30KTR	BG40KTR
Input (DC)				
Max. DC Voltage (V)	1000			
Staring Voltage /Min. Operation Voltage (V)	300/280			
Starting Power (W)	30			
MPPT Operating Voltage Range (V) / Rated Voltage	280 - 800/610V			
Rated Power Voltage Range (V)	450 - 800	480 - 800	480 - 800	580 – 800
Number of MPPT / String Per MPPT	2/4			
Max. DC Power (W)	20800	26000	31200	40800
Max. DC Current (A) Per MPPT x Number Of MPPT	25x2	30x2	33x2	33x2
DC Switch	Integrated			
Output (AC)				
Rated Power (W)	20000	25000	30000	40000
Max. AC Current (A)	32	40	48	48
Rated AC Voltage And Range	3/PE, 230/400V (320–460V); 3/PE, 220/380V (320–460V).			3/PE, 277/480V (384–552V)
	According to VDE0126-1-1, VDE-AR-N4105, CQC, G59/3, C10/11, AS4777/3100, PEA			
Rated Grid Frequency And Range	50Hz (47–51.5Hz) / 60Hz (57–61.5Hz) According to VDE0126-1-1, VDE-AR-N4105, CQC, G59/3, C10/11, AS4777/3100, PEA			
Power Factor	-0.8~+0.8 (Adjustable)			
THD	< 3% (at rated power)			
AC Connection	Three-phase (L1, L2, L3, PE) or (L1, L2, L3, N, PE)			
System				
Cooling	Smart cooling			
Max. Efficiency	98.40%	98.40%	98.50%	98.60%
Euro-efficiency	98.00%	98.00%	98.00%	98.20%
MPPT Efficiency	99.9%			
Ingress Protection	IP65			
Consumption At Night	<0.5W			
Isolation Mode	Transformerless			
Operating Temperature	-25℃~+60℃ (derate after 45℃)			
Relative Humidity	0–95%, no condensation			
Protection	DC isolation monitoring, DC monitoring, grounding fault monitoring, grid monitoring, island protection, overvoltage and short circuit protection, etc.			
Noise	< 50dB			< 55dB
Display And Communication				
Display	3.5inches LCD display, support backlit display			
System Language	English, Chinese, German, Dutch			
Key	Integrated			
Communication Mode	RS485 (Standard), WiFi, Ethernet (Optional)			
Mechanical Parameters				
Dimension (H x W x D mm)	660x525x250			
Weight (kg)	52			
Installation	Wall mounting			
Others				
DC Terminal	MC4			
Certifications	TUV, CE, VDE0126-1-1, VDE-AR-N4105, G59/3, C10/11, TF3.2.1, AS4777/3100, CQC EN61000-6-1:4, EN61000-11:12, IEC62109-1:2010, PEA, ZVRT, LVRT			
Factory Warranty(Years)	5(standard) / 10, 15, 20 (optional)			

iMars BG Series

Three phase Grid-tied Solar inverters for US

BG4KTR-US
BG5KTR-US
BG6KTR-US



Description

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It also provides flexible system configuration and monitoring solutions for household and commercial systems.

Features

- The core technologies are from Germany.
- Optimized software for the power grid with much wider adaptability.
- Global integrated monitoring and management system, monitoring APP is available for both Android and iPhone iOS system.
- Much wider operating voltage range, lower starting voltage and higher conversion efficiency.
- Designed with latest thermal simulation technology for a longer service life.

Specification

	BG4KTR-US		BG5KTR-US	BG6KTR-US
Input (DC)				
Max. DC Voltage (V)	1000			
Starting Voltage (V)	200			
Min. Operation Voltage (V)	180			
MPPT Operating Voltage Range (V) / Rated Voltage (V)	180 - 800/610V			
Rated Power Voltage Range (V)	220 - 800			
Number of MPPT / String Per MPPT	2/2			
Max. DC Power (W)	4400	5300	6300	
Max. DC Current (A) Per MPPT x Number Of MPPT	10 x 2	14 x 2	19 x 2	
DC Switch	Integrated			
Output (AC)				
Rated Power (W)	4000	5000	6000	
Max. AC Current (A)	12	15	18	
Rated AC Voltage	3/PE, 220V/127V			
Rated Grid Frequency	60Hz (57~61.5Hz)			
Power Factor	-0.8~+0.8 (Adjustable)			
THD	< 3% (at rated power)			
AC Connection	Three-phase (L1, L2, L3, PE) or (L1, L2, L3, N, PE)			
System				
Cooling	Natural cooling	Smart cooling		
Max. Efficiency	97.60%	97.80%	98.20%	
Euro-efficiency	97.00%	97.30%	97.60%	
MPPT Efficiency	99.9%			
Ingress Protection	IP65			
Consumption At Night	<1W			
Isolation Mode	Transformerless			
Operating Temperature	-25℃ ~ +60℃ (derate after 45℃)			
Relative Humidity	<30dB	<50dB		
Protection	DC isolation monitoring, DC monitoring, grounding fault monitoring, grid monitoring, island protection, overvoltage and short circuit protection, etc.			
Display And Communication				
Display	3.5inches LCD display, support backlight display			
System Language	English, Chinese, German, Dutch			
Communication Mode	RS485 (Standard), Ethernet, WiFi (Optional)			
Mechanical Parameters				
Dimension (H x W x D mm)	575x360x150			
Weight (kg)	20	23		
Installation	Wall mounting			
Others				
DC Terminal	MC4			
Factory Warranty(Years)	5(standard) / 10, 15, 20 (optional)			

iMars BG Series

Three phase Grid-tied Solar inverters for US

BG7KTR-US
BG9KTR-US
BG10KTR-US



Description

iMars BG series three-phase grid-tied solar inverters adopt the latest technologies combination of T type three level topology and SVPWM, provide flexible system configuration and monitoring solutions for household, commercial and power plant systems.

Features

- Dual MPPTs work independently and allow unbalanced input power. One MPPT maximum input is up to 60% of Max.DC power.
- High efficiency and stable performance at entire input voltage and output power range.
- Max. efficiency is up to 98.3%.
- Wide input voltage range gives more possibilities for accepting different string configuration and different type of PV modules.
- Bus capacitors consist of advanced film capacitors, designed with the latest thermal simulation technology for longer lifespan.
- Integrated intelligent DC combiner and surge protection improve system flexibility and lower the cost.
- 5V 200mA auxiliary DC power interface is optional for system expansion.
- AC output power is adjustable between 1-100%.
- Reactive power control and power factor adjustable: 0.8 leading ~ 0.8 lagging.
- RS485, Ethernet, WIFI communication modes are optional for realizing multiple monitoring solutions via PC, mobile phones, internet etc. platforms.

Specification

	BG7KTR-US	BG9KTR-US	BG10KTR-US
Input (DC)			
Max. DC Voltage (V)	1000		
Starting Voltage (V)	200		
Min. Operation Voltage (V)	180		
MPPT Operating Voltage Range (V) / Rated Voltage (V)	180 - 800/610V		
Rated Power Voltage Range (V)	220 - 800	240 - 800	
Number of MPPT / String Per MPPT	2/3		
Max. DC Power (W)	7300	9400	10500
Max. DC Current (A) Per MPPT x Number Of MPPT	19 x 2	21 x 2	23 x 2
DC Switch	Integrated		
Output (AC)			
Rated Power (W)	7000	9000	10000
Max. AC Current (A)	20	25	28
Rated AC Voltage	3/PE, 220V/127V		
Rated Grid Frequency	60Hz (57~61.5Hz)		
Power Factor	-0.8~+0.8 (Adjustable)		
THD	< 3% (at rated power)		
AC Connection	Three-phase (L1, L2, L3, PE) or (L1, L2, L3, N, PE)		
System			
Cooling	Smart cooling		
Max. Efficiency	98.20%	98.30%	98.30%
Euro-efficiency	97.60%	97.80%	97.80%
MPPT Efficiency	99.9%		
Ingress Protection	IP65		
Consumption At Night	<0.5W		
Isolation Mode	Transformerless		
Operating Temperature	-25℃ ~ +60℃ (derate after 45℃)		
Relative Humidity	<50dB		
Protection	DC isolation monitoring, DC monitoring, grounding fault monitoring, grid monitoring, island protection, overvoltage and short circuit protection, etc.		
Display And Communication			
Display	3.5inches LCD display, support backlit display		
System Language	English, Chinese, German, Dutch		
Communication Mode	RS485 (Standard), Ethernet, WiFi (Optional)		
Mechanical Parameters			
Dimension (H x W x D mm)	610x480x204		
Weight (kg)	38		
Installation	Wall mounting		
Others			
DC Terminal	MC4		
Factory Warranty(Years)	5(standard) / 10, 15, 20 (optional)		

iMars BG Series

Three phase Grid-tied Solar inverters for US

BG12KTR-US
BG15KTR-US
BG17KTR-US



Description

iMars BG series three-phase grid-tied solar inverters adopt the latest technologies combination of T type three level topology and SVPWM, provide flexible system configuration and monitoring solutions for household, commercial and power plant systems.

Features

- Dual MPPTs work independently and allow unbalanced input power. One MPPT maximum input is up to 60% of Max.DC power.
- High efficiency and stable performance at entire input voltage and output power range.
- Max. efficiency is up to 98.6%.
- Wide input voltage range gives more possibilities for accepting different string configuration and different type of PV modules.
- Bus capacitors consist of advanced film capacitors, designed with the latest thermal simulation technology for longer lifespan.
- Integrated intelligent DC combiner and surge protection improve system's flexibility and lower the cost.
- 5V 200mA auxiliary DC power interface is optional for system expansion.
- AC output power is adjustable between 1-100%.
- Reactive power control and power factor adjustable: 0.8 leading ~ 0.8 lagging.
- RS485, Ethernet, WIFI communication modes are optional for realizing multiple monitoring solutions via PC, mobile phones, internet etc. platforms.

Specification

	BG12KTR-US	BG15KTR-US	BG17KTR-US
Input (DC)			
Max. DC Voltage (V)	1000		
Starting Voltage (V)	200		
Min. Operation Voltage (V)	280		
MPPT Operating Voltage Range (V) / Rated Voltage (V)	280 - 800 / 610V		
Rated Power Voltage Range (V)	320 - 800	320 - 800	320 - 800
Number of MPPT / String Per MPPT	2/4		
Max. DC Power (W)	12400	15400	17400
Max. DC Current (A) Per MPPT x Number Of MPPT	25 x 2	30 x 2	33 x 2
DC Switch	Integrated		
Output (AC)			
Rated Power (W)	12000	15000	17000
Max. AC Current (A)	34	42	48
Rated AC Voltage	3/PE, 220V/127V		
Rated Grid Frequency	60Hz (57~61.5Hz)		
Power Factor	-0.8~+0.8 (adjustable)		
THD	< 3% (at rated power)		
AC Connection	Three-phase (L1, L2, L3, PE) or (L1, L2, L3, N, PE)		
System			
Cooling	Smart cooling		
Max. Efficiency	98.30%	98.30%	98.40%
Euro-efficiency	97.80%	97.80%	98.00%
MPPT Efficiency	99.9%		
Ingress Protection	IP65		
Consumption At Night	<1W		
Isolation Mode	Transformerless		
Operating Temperature	-25℃ ~ +60℃ (derate after 45℃)		
Relative Humidity	<50dB		
Protection	DC isolation monitoring, DC monitoring, grounding fault monitoring, grid monitoring, island protection, overvoltage and short circuit protection, etc.		
Display And Communication			
Display	3.5 inches LCD display, support backlit display		
System Language	English, Chinese, German, Dutch		
Communication Mode	RS485 (Standard), Ethernet, WiFi (Optional)		
Mechanical Parameters			
Dimension (H x W x D mm)	660x525x220		
Weight (kg)	52		
Installation	Wall mounting		
Others			
DC Terminal	MC4		
Factory Warranty(Years)	5(standard) / 10, 15, 20 (optional)		

Hybrid Inverter

BD3K6TL
BD5KTL
BD3K6TL-TD
BD5KTL-TD



Description

BD series hybrid inverter Series is a new generation of photovoltaic storage products which were developed by INVT based on the intelligent and free maintenance concept. This series integrates charge, energy storage and photovoltaic inverter inside with multifunctional and integrated BMS (battery management system). It can automatically detect the state of grid and connect to it smoothly. This series is the best solution for the demand of peak shaving and can help consumers to maximize self-consumption of PV system.

Features

- Support moving roller type and wall mounting type installation, which largely saves the space and can move flexibly, suitable for various occasions;
- Professional BMS (battery management system), compatible with lead-acid battery and lithium battery;
- Available for setting the charging current of battery according to various battery types;
- Combination of on-grid and off-grid function, UPS and backup all-in-one function;
- User-friendly HMI, colorful LCD;
- Equipped with a variety of communication options: RS485 (standard), USB (standard), Ethernet (standard), Wifi (optional), diesel genset communication interface (optional);
- With Zero Export Function.

Specification

	BD3K6TL	BD5KTL	BD3K6TL-TD	BD5KTL-TD
DC INPUT (PV)				
Max. DC Input Power (W)	5200	6600	5200	6600
Max. DC Voltage (V)	5200			
Nominal DC Voltage (V)	380			
Start-up Voltage / Minimum Working Voltage (V)	150V/100			
MPP Voltage Range	120V~450			
Max. Input Current	15A			
Number of MPPT / String Per MPPT	2/2			
AC OUTPUT 1 (GRID)				
Rated Power (W)	3680	4600	3680	4600
Rated Voltage	208/220/230/240V (Single-phase)			
Rated Frequency	50Hz/60Hz			
Voltage Range	180V~270 VAC			
Frequency Range	45~55Hz/55~65Hz			
Rated Current	16A	22A	16A	22A
Power Factor	≥0.99 (at rated power)			
THDI	≤3% (at rated power)			
Max. Efficiency	97.20%	97.70%	97.20%	97.70%
Euro- Efficiency	96.50%	97.00%	96.50%	97.00%
AC OUTPUT 2 (LOAD)				
Rated Power (W)	3000			
Rated Voltage (V)	208/220/230/240V (±2%)			
Rated Frequency	50Hz/60Hz (±0.2%)			
BATTERY				
Rated Voltage	48V		120V	
Voltage Range	43-58V		108-138V	
Type of Battery	Lithium battery or Lead-acid battery			
Max Charging Current	≤65A		≤20A	
Max Discharging Current	≤65A		≤20A	
Max. Efficiency	94%		95%	
OTHERS				
Working Temperature	-25°C to +40°C			
Cooling Type	Fan			
Protection Degree/ Altitude	IP 20/ < 1000m;			
Humidity	0~95%, Non-condensing			
Noise	< 45dB			
Protection	DC insulation monitoring, DC over current protection, Grounding fault monitoring, Overheating protection, Electronic Protection, Overvoltage and short circuit protection etc.			
Display	LCD			
LED / Button	Integrated			
Communication Mode	RS485 (standard) Wifi (optional), Ethernet (optional), CAN-BUS (Internal Communication), USB, Genset Port			
Dimension (H x W x D mm)	500x430x190			
Weight (kg)	25			
Installation	Moving roller / Wall-mount			
Certification	VDE-AR-N4105, AS4777/3100, G83/2			
Warranty (Years)	1 (standard) / 3 (optional)			

Smart PV Combiner

JTPV-CB6

JTPV-CB8

JTPV-CB10

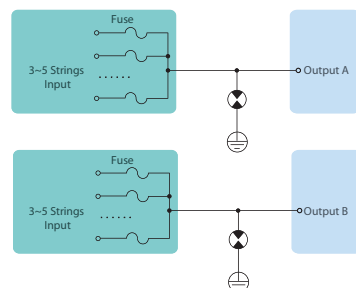


Description

JTPV series smart photovoltaic combiner is designed for multi-string inputs photovoltaic generation system. JTPV integrates functions as string combining, detection, monitoring and protection, and ensures secure, reliable and simple connection between multi-string PV inputs and inverter. This series can be attached to iMars inverter as a unit, or installed separately.

Features

- Two outputs, directly connect to two MPPTs of inverter
- Integrating DC lightning protection module and fuse, upgrade input protection to inverter
- Precise monitoring string current, voltage and operation status
- Extended Analog Input port, supporting to connect environment monitoring instrument
- Intelligent anti feedback function is optional.
- Acting to smart grid dispatching signals
- Setting output power and time interval via WinExpert and PhoneExpert
- An external 12V 100mA auxiliary power connector providing availability to system expansion
- RS485 communication interface, fully compatible with photovoltaic power generation system of internal and external communication

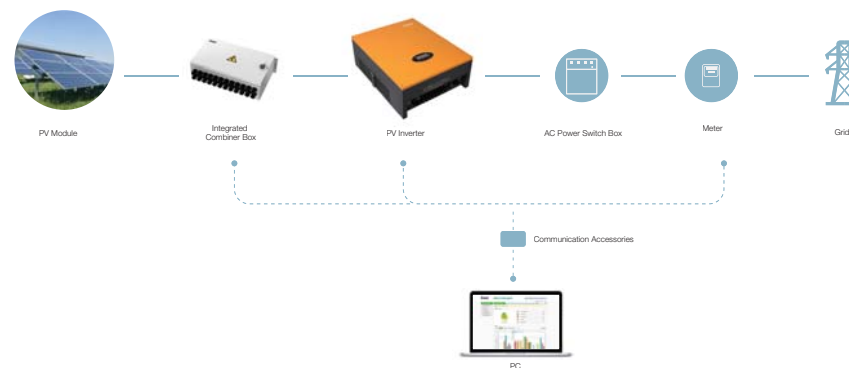


Specification

	JTPV-CB6	JTPV-CB8	JTPV-CB10
Electrical Parameter			
Number of Max. DC Input strings	6	8	10
Max. DC input Voltage (V)	1000		
Max. DC Output Current(A) × Output strings	30x2	40x2	50x2
Model of Input Connection	M16		
Model of Output Connection	M16		
Detection Function	Input String Current; Output Voltage; SPD State		
Communication Interface	RS485		
Communicating Protocol	MODBUS-RTU		
Power Supply	Internal Power Supply		
Measuring Accuracy	2% rated (Rated current Per string 10A)		
Extended Analog Input	5 inputs of 4–20mA current signal		
Environmental Parameter			
Protection Degree	IP65		
Operation Temperature	-25 ℃ ~+70 ℃		
Relative Humidity	99%, no condensation		
Operating Altitude	4000m		
Protection Parameter			
Fuse	15A		
Number of Fuse	6	8	10
SPD	Class II		
Lightening Protection for Communication	Integrated		
Lightening Protection for Communication Port of PC Software	None		
Mechanical Parameter			
Dimension (H x W x D mm)	380 x 280 x 140		
Weight (kg)	<10		
Installation	M5 screw		

Intelligent Anti Feedback Solutions

In some applications, Power Grid Corp normally requires the PV system to be equipped with anti feedback function. That means that surplus generated electricity is not allowed to be injected into the grid via a low voltage distribution circuit and must be used for local consumption. With intelligent anti feedback function, the system sends a control signal to the inverter and adjusts the power output of the grid inverter to attain the objective of providing max power to the local load and no feedback to the grid.



Solar Pumping Inverter

BPD0K7TN

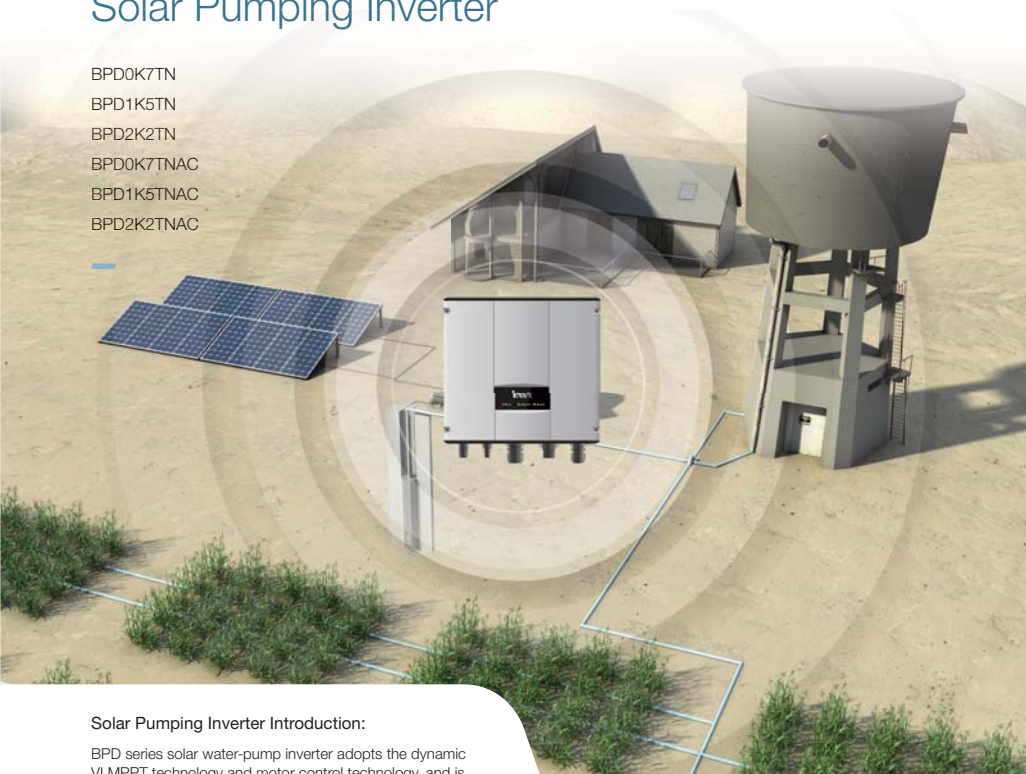
BPD1K5TN

BPD2K2TN

BPD0K7TNAC

BPD1K5TNAC

BPD2K2TNAC



Solar Pumping Inverter Introduction:

BPD series solar water-pump inverter adopts the dynamic VI MPPT technology and motor control technology, and is suitable for AC water pumps with prompt response, high efficiency and stable performance.

Features

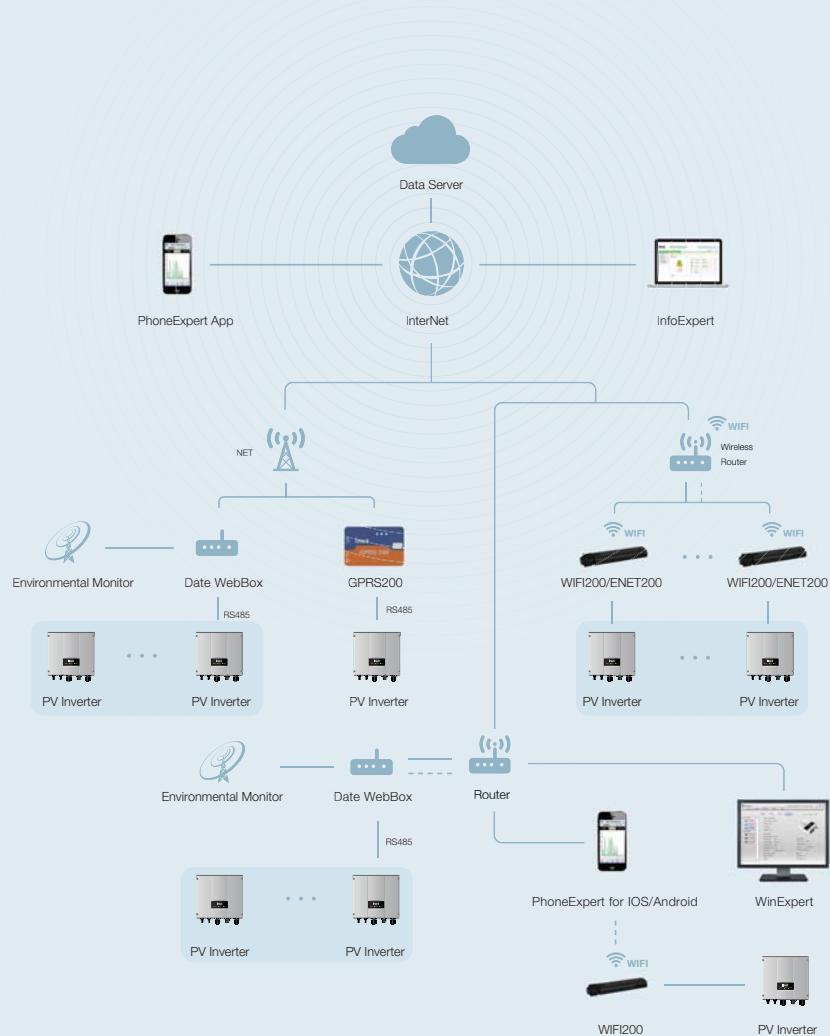
- Support driving single-phase motor and three-phase 220V motor.
- One pump inverter can be connected with multiple pumps, support vector control.
- Protection class IP65 and fanless system design, with convenient installation, maintenance free.
- Bypass function optional, support 220V Utility Power input and diesel engine input; optional water level detection module and diesel engine start/stop module.
- Low startup voltage and wide input voltage range give more possibilities for accepting multi PV strings configuration and different type of PV module, save PV module cost.
- Digital intelligent control can flexibly adjust and set the pump speed range. In addition to the soft start function it can also provide lightning protection, overvoltage, over current, overload protection function etc.

Specification

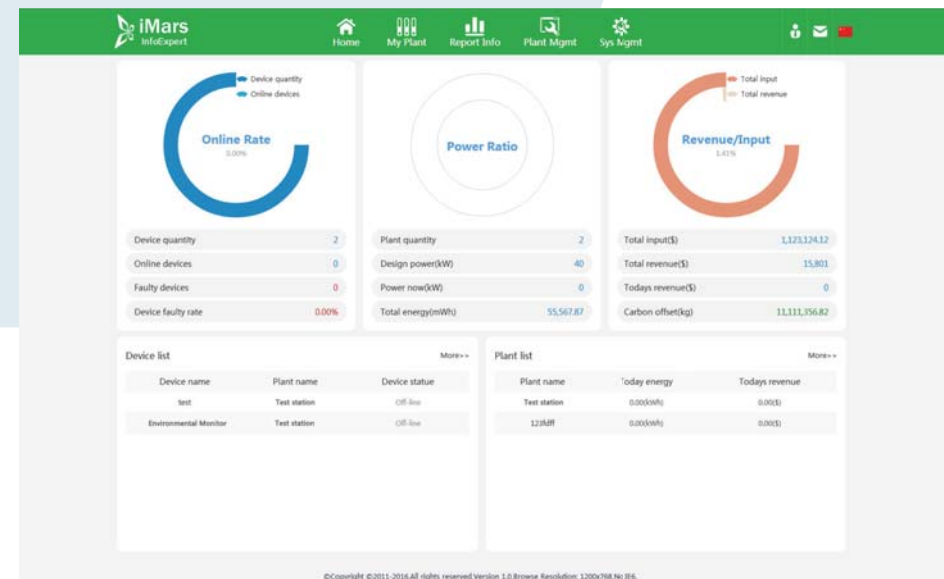
	BPD0K7TN	BPD1K5TN	BPD2K2TN	BPD0K7TNAC	BPD1K5TNAC	BPD2K2TNAC
Input (DC)						
Max DC Voltage (V)	450	450		450	450	
Starting voltage (V)	80	100		80	100	
Minimum working voltage (V)	60	80		60	80	
MPPT Operating Voltage Range (V)	80-400	100-400		80-400	100-400	
Number of MPPT	1					
Max. DC Current (A)	9	12	12	9	12	12
Bypass input (AC)						
Input voltage (VAC)	N/A			220/230/240(1PH)-15%+10%		
Input frequency (Hz)	N/A			47-63		
Input connect method (AC)	N/A			1P2L		
Output (AC)						
Rated power (W)	750	1500	2200	750	1500	2200
Rated current (A)	5.1 (1PH)	10.2 (1PH)	14 (1PH)	5.1 (1PH)	10.2 (1PH)	14 (1PH)
	4.2 (3PH)	7.5 (3PH)	10 (3PH)	4.2 (3PH)	7.5 (3PH)	10 (3PH)
Output connect method	1P2L / 3P3L					
Output frequency (Hz)	1-400					
Performance						
Control mode	Motor control technology					
Type of motor	asynchronous machine					
Other Parameter						
Dimension (H x W x D mm)	280×300×130					
Weight (kg)	≤10.5					
Protection	IP65					
Cooling	Natural Cooling					
HMI	LED screen extend (not support LCD screen)					
communication						
external communication	RS485/3 digital Inputs					
Certifications						
Certification	CE: IEC61800-3 C3					
Working environment						
Ambient temperature	-25℃ ~ 60℃ (derate after 45℃)					
Working altitude	3000m (more than 2000m derating)					
Design life	5 years (warranty 18 months)					
Recommended solar array configuration						
250Wp (Open-circuit voltage 38V±3V)	4*1	8*1	11*1	4*1	8*1	11*1
300Wp (Open-circuit voltage 45V±3V)	3*1	6*1	9*1	3*1	6*1	9*1

Monitoring Solution

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 transmit Real-time data to our server via internet. Our customers can login monitoring website or use smart phone Apps to check power plant info



Remote Monitoring Platform iMars InfoExpert



Description

iMars InfoExpert photovoltaic power system remote monitoring platform is a new generation of photovoltaic networking monitoring platform developed by INVT. It includes power monitoring, power management, fault processing equipment, power generating capacity and investment income data analysis functions, provides professional power management and intelligent operation and maintenance scheme for distributors, installers and end users.

Features

- Able to communicate with the WEB browser version of the iMars WinExpert remote monitoring platform server.
- Manage user information and power station equipment
- Able to view the status of the operation of power plants, power plant equipment fault information, realtime power and investment income and other related data; and have the report function.
- Visualize interface, display the power station and its equipment data, running state in chart.
- Able to query inverter version information, update online, collect user feedback, adjust output power and other functions.
- A neutral version of the login interface is available to our important partners.

Data Webbox



Description

Data Webbox is a data collection equipment which connects multiple solar inverters to server. Users and manufacturers can effectively monitor the power generation and operation status by collect the data of solar inverters and weather station. Meanwhile, it also helps manufacturer maintain the equipments through remote data acquisition.

Features

- Support up to 10 inverters of data acquisition;
- Support USB for data storage;
- Can connect combiner, environment monitor, transformers and other equipment;
- Plug and play, easy to use.

Can be connected to the cloud platform, and relevant monitoring sites, supporting mobile phone APP

Functions:

- Collect solar inverters operation data and environmental monitoring equipment data, combiner box data, dry type transformer equipment data etc.
- Two RS-485 port for data collection, one for inverter data collection, another for weather station data collection;
- Support Ethernet, GPRS and WiFi to upload data to sever;
- Flexibly configure the required monitoring data by Data Collection Web Page or PV Monitoring Site;
- Support remote maintenance and upgration. Users can grasp the dynamic real time operation status of the power plant at any time through the mobile phone APP or monitoring website.

In case there is any fault, It can inform the users by SMS, email, WeChat or App, which reduces the power plant operation and maintenance work. Ethernet communication of the data collector adopts the international universal networking protocol which is an important interface to access the cloud platform.

Specification

Parameter	
Max.Supported Device	10
Inverter Interface	RS-485
Remote Communication Mode	GPRS, Ethernet, WiFi
Serial Communication Distance	< 1km
Serial Communication Bord Rate	1200-38400bps
Radio Frequency	800/900/1800/1900MHz
The Data Sampling Interval	5 minutes by default, configurable
Data Storage	RS485
Parameter Setting Method	Web page or site monitoring
The Firmware Update Mode	Serial port, Ethernet
Data Access Mode	Serial port, remote server
Status Display	5 LED
Electrical Features	
Input Voltage	DC 5V
Static Power	< 2w
The Maximum Instantaneous Power	< 3w
Storage Temperature	-40 ~ 85 °C
Operating Temperature	-10 ~ 65 °C
Working Humidity	10%~90% relative humidity, no condensation
Storage Humidity	< 40%
Ingress Protection	IP21
Physical Parameters	
Size	150mm x 80mm x 26mm
Weight	1.1KG
Installation	Class II

Monitoring Modules

iMars Wifi200 / ENET200 / GPRS200 Communications Server

Product Description

iMars Wifi200/ENET200 is an external wireless / wired communication device, which connects with solar inverter via RS485 interface to monitor inverter's operation status and history. It is very easy to view the data with monitoring software (iMars WinExpert for PC or iMars PhoneExpert for smart phone).

Specification

- Serial Port: RS485 Waterproof Plug
- WiFi 200 Transmission Distance: 30m (no barrier)
- ENET 200 Transmission Distance: 100m
- Wireless Protocol Standard: 802.11 n/g/b
- Operation Temperature: 0°C ~ +40°C
- Working Humidity: 10% - 90% RH (no condensation)
- Storage Temperature: -40°C ~ +70°C
- Store Humidity: 5% - 90% RH (no condensation)
- Size: 139mm x 31.7mm x 21mm



iMars PhoneExpert
(for iOS)



iMars PhoneExpert
(for Android)



Monitoring Software



Introduction

WinExpert and PhoneExpert are designed for monitoring grid-tied solar system. The user can use the PC or handheld terminal equipment to connect iMars inverter. iMars WinExpert and PhoneExpert can display and record the real-time parameters, status, historical data and alert information of the overall solar system and the single iMars inverter.

Software Function

iMars WinExpert	iMars PhoneExpert
• The system generating capacity, economic benefits and environmental benefits	• The system generating capacity, economic benefits and environmental benefits
• View and print the system information	• View the inverters real-time status
• View the inverters real-time status	• Add and remove inverters
• Add and remove inverters	• Communication management
• Communication management	
• E-mail system	

Solar System Design Software

Introduction

iMars SysExpert, an easy-to-use professional grid-tied PV system design software, is designed specifically for iMars series grid-tied solar inverters. After three steps of editing system information, component selection and system configuration, a single-phase or three-phase photovoltaic grid-tied power system can be designed to produce a professional design report within a few minutes.

iMars
SysExpert

Features

- User-friendly Interface;
- Three-step design process;
- Professional design report;
- Constantly updated database support;
- Powerful system of mathematical analysis model;



Applications & Service Network

invt

Poland Region

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 Warsaw, Poland
Tel: 0048 501937227
Email: Solar@invt.com.cn



Netherlands

Denmark

invt

Germany Region

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 52146 Wuerselen Germany
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Email: Solar@invt.com.cn



Belgium



Ukraine



Greece

invt

Mexico Region

City: Mexico City
Add: Col. Cuauhtemoc, Rio Guadalquivir
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 0052 (1) 442 438 5506
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Brazil

invt

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 SP | BRASIL
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City: Moscow
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 Bldg.2.2.
Tel: 0079 653 641 914
Email: Solar@invt.com.cn



Turkey



India

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 Malad (W), Mumbai.
Tel: 0091 224 266 2796
Email: Solar@invt.com.cn



Thailand

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Thailand Region

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 KlongToey Bangkok 10260,Thailand
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Email: Solar@invt.com.cn

invt

INVT Headquarters Shenzhen INVT Electric Co., Ltd

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Add: 4#Bldg, Gaofa Technological Park,
 Longjing, Nanshan District, Shenzhen
Service Hotline: 0086 755 86312834
 (Sales, Technical Consultation, After-sales)
Tel: 0086 755 86312834
Fax: 0086 755 86312880
Email: Solar@invt.com.cn



Shanghai, China



Shenzhen, China



Zhongshan, China



Perth, Australia



Queensland, Australia

invt

Australia Region

City: Sydney
Add: 2702/2 Cunningham Street, Sydney,
 NSW 2000.
Tel: 0061 040 650 6055, 0061 027 901 5244
Email: Solar@invt.com.cn

Key information needed for maintenance

- Model, product serial No.
- Fault description
- Customer location and contacts