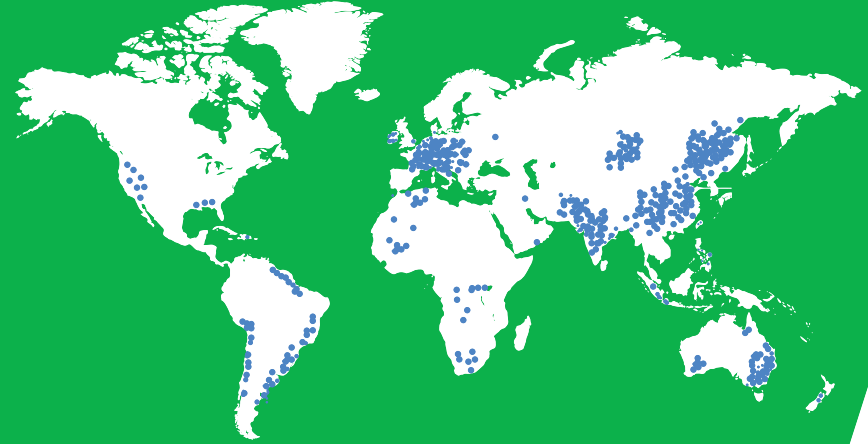


iMars Series

Solar Inverter Catalog

Power by solar, Cool the earth.

Powered by Solar



Sales E-mail: solar@invt.com.cn Service E-mail: solar-service@invt.com.cn Website: www.invt-solar.com

INVT Solar Technology (Shenzhen) CO., LTD.

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Y8/1-05(V8.5)



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



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About Us

Introduction

INVT, which was established in 2002, and listed as an A-share company on the Shenzhen Stock Exchange (stock code: 002334) in 2010.

Based on the accumulation of 16 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 solar inverter successfully.

iMars series solar inverters, including grid-tied solar inverter, hybrid inverter, off-grid solar inverter, solar pumping inverter, monitoring software, etc., which 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. What's more, its products are exported to more than 60 countries and regions in Europe, Australia, Asia, Middle East and so on.

For its better service and maintenance in time for different countries and regions, INVT has established more than 40 maintenance points all over the world, which has built a closed-loop, seamless, linking model to provide service for customers by online diagnosis and offline services.

INVT Solar has a professional technical support, efficient production delivery and outstanding after-sales service. On the way to be a PV leader, we will accelerate the development of PV business and market layout in the future, and constantly close to customer needs. As well we committed to become a reliable new energy solutions provider, to make our mission come true—Power by solar, Cool the earth.

Suzhou Industrial Park

With more than one hundred and thirty thousand square meters covered area, it locates in Science and Technology City of high-tech zone, Suzhou, China. The building area of factory has over 40,000m² for the production line. In order to promote the new concept of energy conservation, Suzhou Industrial Park is constructed with a design of low-carbon ecological environment. For example, the rainwater collection system can be reused for greening and watering.



Guangming Industrial Park

With covering a floor area of 13,800m² and building area of 34,700m², it is located in Gongming Street, Guangming New District, Shenzhen. Based on the overall planning idea of Modern, Green and Environmental Protection, Guangming Industrial Park would be made up of office, R&D, Sales and production with a three-dimensional greening design.



Our Advantages

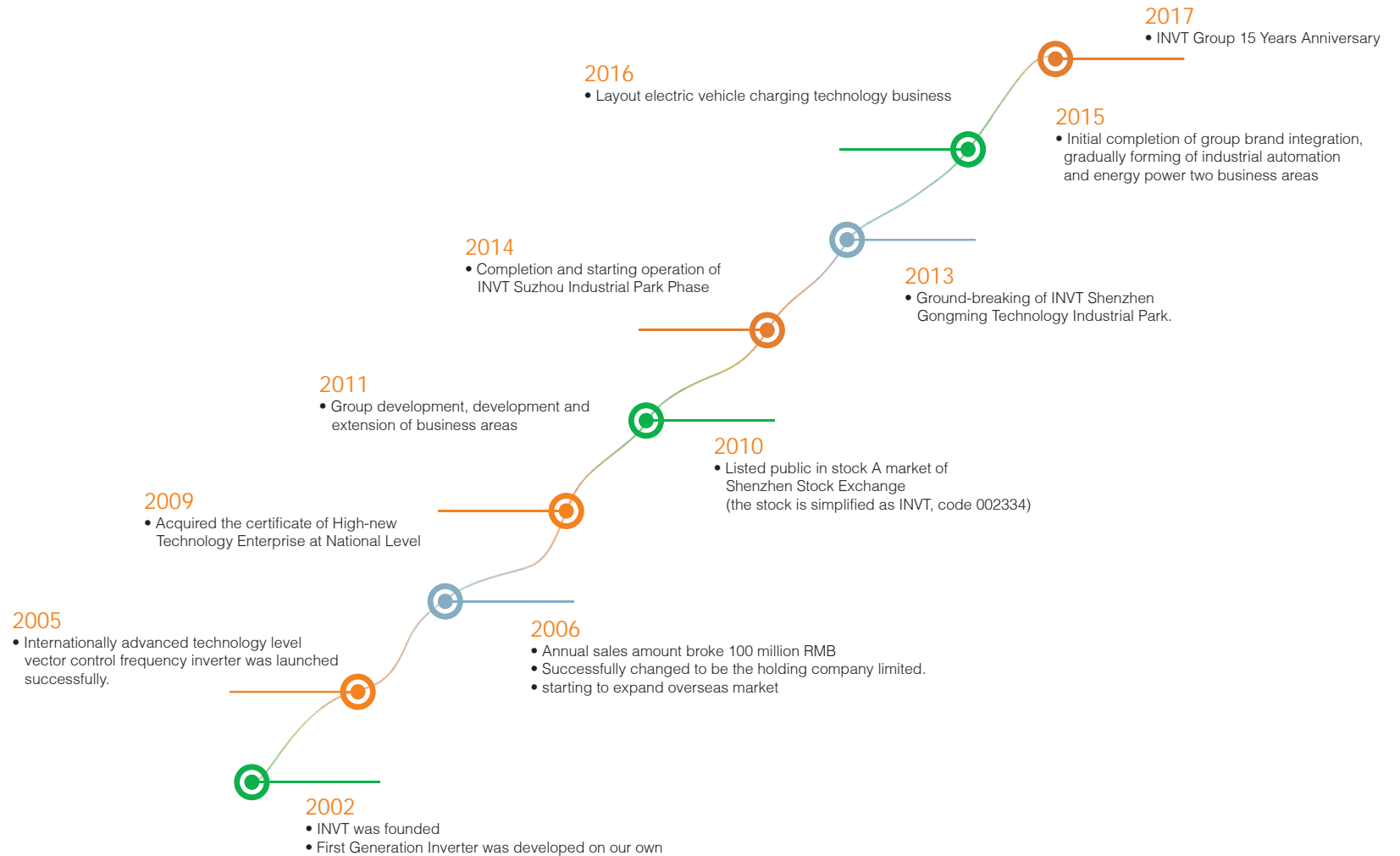
13 R&D centers.

More than
10%
sales revenue is
invested in R&D.

8
laboratories, awarded
ACT from TUV SUD and
WTDP-UL qualification,
recognized by CNAS.

More than
850
pcs of patents.

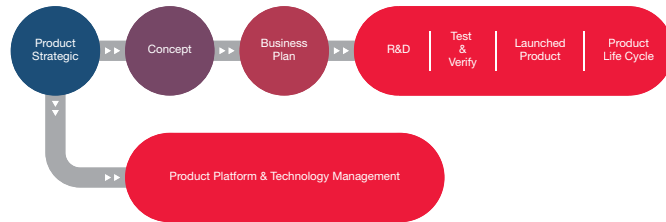
Development Milestone



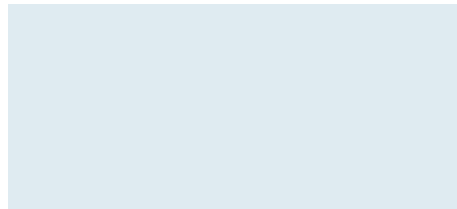
How We Make the Differences

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

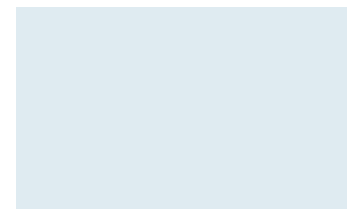


Partners



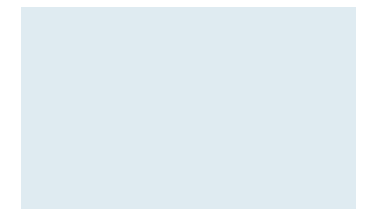
Strict Product Quality Control

- More than 16 years mature experience of manufacturing processes
- Two manufacturing bases in Shenzhen and Suzhou.
- With smart manufacturing production line: Automatic integration line, automatic integrated spraying line, AGV automatic material distribution and storage system.
- Using advanced supply chain management model, strict quality management system, efficient operation, perfect production, timely application.
- 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
- The products are insured by well-known international property insurance company (AIG) for Products/Completed Operations Liability insurance.



Product Family

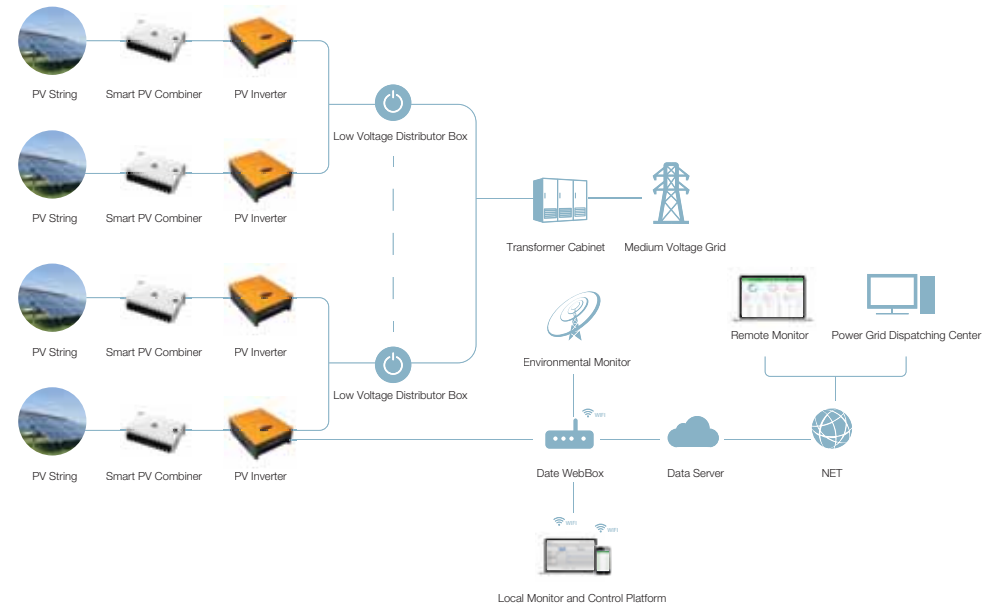
iMars Inverter

Residential 0.75-6KW	Commercial/Plant 4-70KW	Other
BD3KTL BD5KTL BD3KTL-TD BD5KTL-TD	BG4KTR BG5KTR BG6KTR BG8KTR BG10KTR BG4KTR-US BG5KTR-US BG6KTR-US	BN1012C/E BN1024C/E BN1512C/E BN1524C/E BN2012C/E BN2024C/E BN3012C/E BN3024C/E BN4048C/E BN5048C/E BN6048C/E
MG750TL MG1KTL MG1K5TL MG2KTL MG3KTL MG4KTL MG4K6TL MG5KTL MG3KTL-2M MG4KTL-2M MG4K6TL-2M MG5KTL-2M MG6KTL-2M	BG12KTR BG15KTR BG17KTR BG12KTR-US BG15KTR-US BG17KTR-US	BPD0K7TNAC BPD1K5TNAC BPD2K2TNAC BPD004TNAC
	BG20KTR BG25KTR BG30KTR BG33KTR BG35KTR BG40KTR-HV BG50KTR-HV	BG40KTR BG50KTR BG60KTR BG70KTR

Monitoring Products

Product	Software	Platform
<p>Handheld HMI Data Webbox Wifi 200 / GPRS200</p>	<p>InfoExpert / PhoneExpert</p>	<p>SysExpert</p>

Solution for PV Plant



Product Catalog

Model	Max. DC Voltage (V)/ Rated input voltage(V)	Max Input Current (A)	Max. DC Input Power (W)
MG750TL	400/300	8x1	900
MG1KTL	450/300	9x1	1200
MG1K5TL		10x1	1700
MG2KTL		12x1	2200
MG3KTL	500/360	15x1	3300
MG4KTL	600/360	19x1	4800
MG4K6TL		21x1	5520
MG5KTL		23x1	6000
MG3KTL-2M		9x2	3600
MG4KTL-2M		12x2	4800
MG4K6TL-2M		13x2	5520
MG5KTL-2M	15x2	6000	
MG6KTL-2M	16x2	6300	
BG4KTR	900/580	10x2	4800
BG4KTR-S		12x1	4800
BG5KTR		10x2	5700
BG5KTR-S		12x1	5700
BG6KTR		10x2	7200
BG8KTR	1000/580	12x2	9000
BG10KTR	1000/610	12.5x2	11000
BG12KTR		19x2	14000
BG15KTR		21x2	18000
BG17KTR		23x2	19500
BG20KTR		25x2	20800
BG25KTR		30x2	28000
BG30KTR		33x2	33000
BG33KTR		33x2	36000
BG35KTR		33x2	38000
BG40KTR-HV		33x2	42800
BG50KTR-HV	1100/750	42x2	53000
BG40KTR	1100/740	74x1	55000
BG50KTR		90x1	66000
BG60KTR		120x1	72000
BG70KTR		120x1	77000

Model	Max. DC Voltage (V)/ Rated input voltage(V)	Max Input Current (A)	Max. DC Input Power (W)
BG4KTR-US	1000/610	10x2	4400
BG5KTR-US		14x2	5300
BG6KTR-US		19x2	6300
BG7KTR-US		19x2	7300
BG9KTR-US		21x2	9400
BG10KTR-US		23x2	10500
BG12KTR-US		25x2	12400
BG15KTR-US		30x2	15400
BG17KTR-US		33x2	17400



iMars MG

Single Phase Grid-tied Solar Inverter

MG750TL / 1KTL / 1K5TL / 2KTL / 3KTL



Monitoring solution:



Handheld HMI

WiFi 200
GPRS 200PhoneExpert
InfoExpert
Monitoring Center

SysExpert



Efficient

- The core technologies are from Germany.
- Wider voltage range, lower starting voltage and higher conversion efficiency (Max efficiency can reach to 97.8%).
- Adap to the complex conditions of roof, improve power generation.



Smart

- Smart grid adaptive to meet the requirements of various power grid access.
- Variety of monitoring modes: APP (one-button registration), large screen data monitoring center, cloud monitoring platform.
- Support RS485, GPRS, WiFi, GPRS200.



Reliable

- Aluminum casing, natural cooling, IP65 protection level.
- Adopt internationally famous brand components to ensure the stable operation of inverter.
- Insured by well-known international property insurance company (AIG) for Products /Completed Operations Liability Insurance



Simple

- Home appliance design, easy to operation.
- Small in size, light in weight, easy to install.

Specification

	MG750TL	MG1KTL	MG1K5TL	MG2KTL	MG3KTL
Input (DC)					
Max. DC input power (W)	900	1200	1700	2200	3300
Max. DC input voltage (V)	400	450			
Starting voltage (V) / Min. operation voltage (V)	60/50	80/60			
MPPT Range(V) / Rated input voltage(V)	50-400/300	60-400/300	80-410/300	100-410/300	120-450/360
Number of MPPT / String per MPPT	1/1				
Max. DC current (A) Per MPPT x Number of MPPT	8x1	9x1	10x1	12x1	15x1
DC switch	Optional				
Output (AC)					
Rated output power (W)	750	1000	1500	2000	3000
Max. AC output current (A)	3.6	4.5	6.5	9	13
Grid voltage range	230/180~277V				
Grid frequency range	50Hz(44~55Hz) / 60Hz(54~65Hz)				
Power factor	≥0.99 (at rated power)				
THDi	< 3% (at rated power)				
AC output	Single-phase (L, N, PE)				
System					
Cooling method	Natural cooling				
Max. efficiency	96.80%	96.90%	97.20%	97.20%	97.30%
Euro-efficiency	95.95%	96.00%	96.10%	96.10%	96.50%
MPPT efficiency	99.90%				
Protection degree	IP65				
Self-consumption(at night)	<1 (W)				
Topology	Transformerless				
Operating temperature range	-25℃~+60℃ (derate after 45℃)				
Relative humidity	0~95%, no condensation				
Protection	PV array insulation protection, PV array leakage current protection, Ground fault monitoring, Grid monitoring, Island protection, DC monitoring, Short current protection etc.				
Display and communication					
Display	LCD (standard) / LED (optional)				
LCD language	English, Chinese, German, Dutch				
Communication interface	RS485 (standard) ; WiFi, GPRS200 (optional)				
Mechanical parameters					
Dimension (H x W x D mm)	280x300x138				
Weight (kg)	≤9.5				
Installation	Wall mounting				
Others					
DC terminal	Waterproof terminals				
Grid qualification	DIN VDE 0126-1-1, 2013, VDE-AR-N 4105, 2011, DIN VDE V 0124-100, 2012, EN 50438, 2013, GB3-2:2012, IEC 61727(IEC62116), AS/NZS 4777.2:2015, NB/T32004-2013, IEC 60068-2-1:2007, IEC 60068-2-2:2007, IEC 60068-2-14:2009, IEC 60068-2-30:2005, IEC 61683: 999, C10/11, TF3.2.1				
Safe certificates / EMC certificates	IEC 62109-1:2010, IEC 62109-2:2011, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011				
Factory warranty	5 years (standard)				

iMars MG

Single Phase Grid-tied Solar Inverter

MG4KTL / 4K6TL / 5KTL



Monitoring solution:



Handheld HMI

WiFi 200
GPRS 200PhoneExpert
InfoExpert
Monitoring Center

SysExpert



Efficient

- The core technologies are from Germany.
- Wider voltage range, lower starting voltage and higher conversion efficiency (Max efficiency can reach to 97.8%).
- Adap to the complex conditions of roof, improve power generation.



Smart

- Smart grid adaptive to meet the requirements of various power grid access.
- Variety of monitoring modes: APP (one-button registration), large screen data monitoring center, cloud monitoring platform.
- Support RS485,GPRS,WIFI, GPRS200.



Reliable

- Aluminum casing, natural cooling, IP65 protection level.
- Adopt internationally famous brand components to ensure the stable operation of inverter.
- Insured by well-known international property insurance company (AIG) for Products /Completed Operations Liability Insurance



Simple

- Home appliance design, easy to operation.
- Small in size, light in weight, easy to install.

Specification

	MG4KTL	MG4K6TL	MG5KTL
Input (DC)			
Max. DC input power (W)	4800	5520	6000
Max. DC input voltage (V)	600		
Starting voltage (V)/ Min. operation voltage (V)	120/100		
MPPT Range(V) / Rated input voltage(V)	120-550 /360V		
Number of MPPT / String per MPPT	1/2		
Max. DC current (A) Per MPPT x Number of MPPT	19x1	21x1	23x1
DC switch	Optional		
Output (AC)			
Rated output power (W)	4000	4600	5000
Max. AC output current(A)	20	22	24
Grid voltage range	230/180-277V		
Grid frequency range	50Hz(44-55Hz) / 60Hz(54-65Hz)		
Power factor	≥0.99 (at rated power)		
THDi	< 3% (at rated power)		
AC output	Single-phase(L, N, PE)		
System			
Cooling method	Natural cooling		
Max. efficiency	97.70%	97.70%	97.80%
Euro-efficiency	96.70%	96.70%	96.80%
MPPT efficiency	99.90%		
Protection degree	IP65		
Self-consumption(at night)	<1(W)		
Topology	Transformerless		
Operating temperature range	-25℃ ~ +60℃ (derate after 45℃)		
Relative humidity	0-95%, no condensation		
Protection	PV array insulation protection, PV array leakage current protection, Ground fault monitoring,Grid monitoring, Island protection, DC monitoring, Short current protection etc.		
Display and communication			
Display	LCD (standard) / LED(optional)		
LCD language	English, Chinese, German, Dutch		
Communication interface	RS485 (standard) ; WiFi, GPRS200(optional)		
Mechanical parameters			
Dimension (H x W x D mm)	405×360×150		
Weight (kg)	≤15		
Installation	Wall mounting		
Others			
DC terminal	Waterproof terminals		
Grid qualification	DIN VDE 0126-1-1: 2013, VDE-AR-N 4105: 2011, DIN VDE V 0124-100: 2012, GB3-2 :2012, G59/3-2: 2015, IEC 61727(IEC62116), AS/NZS 4777.2: 2015, NB/T32004-2013, IEC 60068-2-1: 2007, IEC 60068-2-2: 2007, IEC 60068-2-14: 2009, IEC 60068-2-30: 2005, IEC 61683: 1999		
Safety certificates / EMC certificates	IEC 62109-1 : 2010, IEC 62109-2 : 2011, EN 61000-6-2: 2005, EN 61000-6-3:2007/A1:2011		
Factory warranty	5 years(standard)		

iMars MG

Single Phase Grid-tied Solar Inverter

MG3KTL- 2M / 4KTL- 2M / 4K6TL- 2M / 5KTL- 2M / 6KTL- 2M



Monitoring solution:



Handheld HMI



WiFi 200
GPRS 200



PhoneExpert
InfoExpert
Monitoring Center



SysExpert



Efficient

- The core technologies are from Germany.
- Wider voltage range, lower starting voltage and higher conversion efficiency (Max efficiency can reach to 97.8%).
- Two MPPT, adap to the complex conditions of roof, improve power generation.



Smart

- Smart grid adaptive to meet the requirements of various power grid access.
- Variety of monitoring modes: APP (one-button registration), large screen data monitoring center, cloud monitoring platform.
- Support RS485,GPRS,WIFI, GPRS200.



Reliable

- Aluminum casing, natural cooling, IP65 protection level.
- Adopt internationally famous brand components to ensure the stable operation of inverter.
- Insured by well-known international property insurance company (AIG) for Products /Completed Operations Liability Insurance



Simple

- Home appliance design, easy to operation.
- Small in size, light in weight, easy to install.

Specification

	MG3KTL-2M	MG4KTL-2M	MG4K6TL-2M	MG5KTL-2M	MG6KTL-2M
Input (DC)					
Max. DC input power (W)	3600	4800	5520	6000	6300
Max. DC input voltage (V)	600				
Starting voltage (V) / Min. operation voltage (V)	120/100				
MPPT Range(V) / Rated input voltage(V)	120-550/360				
Number of MPPT / String per MPPT	2/1				
Max. DC current (A) Per MPPT x Number of MPPT	9x2	12x2	13x2	15x2	16x2
DC switch	Optional				
Output (AC)					
Rated output power (W)	3000	4000	4600	5000	6000
Max. AC output current(A)	16	20	22	24	26
Grid voltage range	230/180-277V				
Grid frequency range	50Hz(44-55Hz) / 60Hz(54-66Hz)				
Power factor	≥0.99 (at rated power)				
THDi	< 3% (at rated power)				
AC output	Single-phase(L, N, PE)				
System					
Cooling method	Natural cooling				
Max. efficiency	97.70%	97.70%	97.70%	97.80%	97.80%
Euro-efficiency	96.70%	96.70%	96.70%	96.80%	96.80%
MPPT efficiency	99.90%				
Protection degree	IP65				
Self-consumption(at night)	<1 (W)				
Topology	Transformerless				
Operating temperature range	-25℃~+60℃(derate after 45℃)				
Relative humidity	0-95%, no condensation				
Protection	PV array insulation protection, PV array leakage current protection, Ground fault monitoring,Grid monitoring, Island protection, DC monitoring, Short current protection etc.				
Display and communication					
Display	LCD (standard) / LED(optional)				
LCD language	English, Chinese, German, Dutch				
Communication interface	RS485 (standard) ; WiFi, GPRS200(optional)				
Mechanical parameters					
Dimension (H x W x D mm)	460x360x150				
Weight (kg)	≤18				
Installation	Wall mounting				
Others					
DC terminal	Waterproof terminals				
Grid qualification	DIN VDE 0126-1-1: 2013, VDE-AR-N 4105:2011, DIN VDE V 0124-100: 2012, G83-2 :2012, G59/3-2: 2015, IEC 61727(IEC62116) , AS/NZS 4777.2: 2015, NB/T32004-2013, IEC 60068-2-1: 2007, IEC 60068-2-2: 2007, IEC 60068-2-14: 2009, IEC 60068-2-30: 2005, IEC 61683: 1999				
Safe certificates / EMC certificates	IEC 62109-1:2010, IEC 62109-2 : 201, EN 61000-6-2: 2005, EN 61000-6-3:2007/A1:2011				
Factory warranty	5 years (standard)				

iMars BG

Three Phase Grid-tied Solar Inverter

BG4KTR / 5KTR / 6KTR / 8KTR / 10KTR



Monitoring solution:

WiFi 200
GPRS 200PhoneExpert
InfoExpert
Monitoring Center

SysExpert



Efficient

- The core technologies are from Germany.
- Wider voltage range, lower starting voltage and higher conversion efficiency (Max efficiency can be reach to 98.3%).
- Two MPPT, adap to the complex conditions of roof, improve power generation.
- Adopt the latest technologies and combination of T-type three level topologies and SVPWM.



Smart

- Smart grid adaptive to meet the requirements of various power grid accesses.
- Variety of monitoring modes: APP (one-button registration), large screen data monitoring center, cloud monitoring platform.
- Support RS485,GPRS,WIFI, GPRS200.



Reliable

- Aluminum casing, natural cooling, IP65 protection level.
- Adopt internationally famous brand components to ensure the stable operation of inverter.
- Insured by well-known international property insurance company (AIG) for Products /Completed Operations Liability Insurance



Simple

- Home appliance design, easy to operation.
- Small in size, light in weight, easy to install.

Specification

	BG4KTR	BG4KTR-S	BG5KTR	BG5KTR-S	BG6KTR	BG8KTR	BG10KTR
Input (DC)							
Max. DC input power (W)	4800	4800	5700	5700	7200	9000	11000
Max. DC input voltage (V)	900			1000			
Starting voltage (V)	220/180			220/150			
Min. operation voltage (V)	200-800/580			200-800/610			
MPPT Range(V)							
Rated input voltage(V)							
Number of MPPT / String per MPPT	2/1	1/1	2/1	1/1	2/1		
Max. DC current (A) Per MPPT	10x2	12x1	10x2	12x1	10x2	12x2	12.5x2
x Number of MPPT							
DC switch	Optional						
Output (AC)							
Rated output power (W)	4000	4000	5000	5000	6000	8000	10000
Max. AC output current(A)	6.4	6.4	8	8	9.6	12.5	14
Grid voltage range	3/PE, 230/400V, (320-460V);3/PE,220/380V,(320-460V)						
Grid frequency range	50Hz(47-51.5Hz) / 60Hz(57-61.5Hz)						
Power factor	-0.8~+0.8 (adjustable)						
THDi	< 3% (at rated power)						
AC output	Three-phase (L1, L2, L3, N, PE)/(L1, L2, L3, PE)						
System							
Cooling method	Natural cooling				Smart cooling		
Max. efficiency	98.10%	98.10%	98.10%	98.10%	98.20%	98.30%	98.30%
Euro-efficiency	97.50%	97.50%	97.60%	97.60%	97.70%	97.80%	97.80%
MPPT efficiency	99.90%						
Protection degree	IP65						
Self-consumption(at night)	<0.5 (W)						
Topology	Transformerless						
Operating temperature range	-25℃ ~ +60℃ (derate after 45℃)						
Relative humidity	0-95%, no condensation						
Protection	PV array insulation protection, PV array leakage current protection, Ground fault monitoring,Grid monitoring, Island protection, DC monitoring, Short current protection etc.						
Noise (dB)	< 30					< 50	
Display and communication							
Display	2.0 inches LCD display, support backlight display						
LCD language	English, Chinese, German, Dutch						
Keyboard	Integrated						
Communication interface	RS485 (standard); WiFi, GPRS200(optional)						
Mechanical parameters							
Dimension (H x W x D mm)	530x360x150				575x360x150		
Weight (kg)	20				23		
Installation	Wall mounting						
Others							
DC terminal	Waterproof terminals						
Grid qualification	IEC 61727(IEC62116) , IEC 60068-2-1: 2007, IEC 60068-2-2: 2007, IEC 60068-2-14: 2009, IEC 60068-2-30: 2005, IEC 61683: 1999, VDE0126-1-1, VDE-AR-N4105, G59/3, C10/11, AS/NZS 4777.2:2015, NB/T 32004-2013, PEA, ZVR						
Safe certificates / EMC certificates	IEC 62109-1 : 2010, IEC 62109-2 : 2011, EN 61000-6-2: 2005, EN 61000-6-3:2007/A1:2011						
Factory warranty	5 years(standard)						

iMars BG

Three Phase Grid-tied Solar Inverter

BG12KTR / 15KTR / 17KTR



Monitoring solution:

WiFi 200
GPRS 200PhoneExpert
InfoExpert
Monitoring Center

SysExpert



Efficient

- Integrated intelligent DC combiner and surge protection improve system flexibility and lower the system cost.
- Max efficiency is up to 98.3%, wide input voltage range, adapt to all kinds of solar panels and string configuration.
- Dual MPPT work independently and allow unbalanced input power. One MPPT maximum input is up to 60% of Max. DC power.
- Adopt the latest technologies and combination of T-type three level topologies and SVPWM.



Smart

- AC output power is adjustable between 1-100%.
- Smart grid adaptive to meet the requirements of various power grid accesses.
- Variety of monitoring modes: APP (one-button registration), large screen data monitoring center, cloud monitoring platform.
- Support RS485,GPRS,WIFI, GPRS200.



Reliable

- IP65 protection level, suitable for various installation environments.
- Bus capacitors consist of advanced film capacitors, designed with the latest thermal simulation technology for longer lifespan.
- Insured by well-known international property insurance company (AIG) for Products /Completed Operations Liability Insurance.



Simple

- High power density, small size.
- Modular design, easy to maintain.

Specification

	BG12KTR	BG15KTR	BG17KTR
Input (DC)			
Max. DC input power (W)	14000	18000	19500
Max. DC input voltage (V)	1000		
Starting voltage (V) / Min. operation voltage (V)	200/180		
MPPT Range(V) / Rated input voltage(V)	180-800/610		
Number of MPPT / String per MPPT	2/2		
Max. DC current (A) Per MPPT x Number of MPPT	19x2	21x2	23x2
DC switch	Integrated		
Output (AC)			
Rated output power (W)	12000	15000	17000
Max. AC output current(A)	20	24	28
Grid voltage range	3/PE, 230/400V, (320-460V); 3/PE,220/380V, (320-460V)		
Grid frequency range	50Hz (47-51.5Hz) / 60Hz (57-61.5Hz)		
Power factor	-0.8~+0.8 (adjustable)		
THDi	< 3% (at rated power)		
AC output	Three-phase (L1, L2, L3, N, PE)(L1, L2, L3, PE)		
System			
Cooling method	Smart cooling		
Max. efficiency	98.20%	98.30%	98.30%
Euro-efficiency	97.60%	97.80%	97.80%
MPPT efficiency	99.90%		
Protection degree	IP65		
Self-consumption(at night)	<0.5 (W)		
Topology	Transformerless		
Operating temperature range	-25°C~+60°C(derate after 45°C)		
Relative humidity	0-95%, no condensation		
Protection	PV array insulation protection, PV array leakage current protection, Ground fault monitoring,Grid monitoring, Island protection, DC monitoring, Short current protection etc.		
Noise (dB)	< 50		
Display and communication			
Display	3.5 inches LCD display, support backlight display		
LCD language	English, Chinese, German, Dutch		
Keyboard	Integrated		
Communication interface	RS485 (standard); WIFI, GPRS200 (optional)		
Mechanical parameters			
Dimension (H x W x D mm)	610x480x230		
Weight (kg)	38		
Installation	Wall mounting		
Others			
DC terminal	Waterproof terminals		
Grid qualification	DIN VDE 0126-1-1: 2013, VDE-AR-N 4105: 2011, DIN VDE V 0124-100: 2012, IEC 61727(IEC62116) , AS/NZS 4777.2: 2015, NB/T32004-2013, IEC 60068-2-1: 2007, IEC 60068-2-2: 2007, IEC 60068-2-14: 2009, IEC 60068-2-30: 2005, IEC 61683: 1999, C10/11: 2012		
Safe certificates / EMC certificates	IEC 62109-1 : 2010, IEC 62109-2 : 2011, EN 61000-6-2: 2005, EN 61000-6-3:2007/A1:2011		
Factory warranty	5 years(standard)		

iMars BG

Three Phase Grid-tied Solar Inverter

BG20KTR / 25KTR / 30KTR / 33KTR / 35KTR / 40KTR-HV / 50KTR-HV



Monitoring solution:



WiFi 200
GPRS 200



PhoneExpert
InfoExpert
Monitoring Center



SysExpert



Efficient

- Integrated intelligent DC combiner and surge protection improve system flexibility and lower the system cost.
- Max efficiency is up to 98.3%, wide input voltage range, adapt to all kinds of solar panels and string configuration.
- Dual MPPT work independently and allow unbalanced input power. One MPPT maximum input is up to 60% of Max. DC power.
- Adopt the latest technologies and combination of T-type three level topologies and SVPWM.



Smart

- AC output power is adjustable between 1-100%.
- Smart grid adaptive to meet the requirements of various power grid accesses.
- Variety of monitoring modes: APP (one-button registration), large screen data monitoring center, cloud monitoring platform.
- Support RS485, GPRS, WIFI, GPRS200.



Reliable

- IP65 protection level, suitable for various installation environments.
- Bus capacitors consist of advanced film capacitors, designed with the latest thermal simulation technology for longer lifespan.
- Insured by well-known international property insurance company (AIG) for Products /Completed Operations Liability Insurance.



Simple

- High power density, small size.
- Modular design, easy to maintain.

Specification

	BG20KTR	BG25KTR	BG30KTR	BG33KTR	BG35KTR	BG40KTR-HV	BG 50KTR-HV
Input (DC)							
Max. DC input power (W)	20800	28000	33000	36000	38000	42800	53000
Max. DC input voltage (V)	1000						1100
Starting voltage (V) / Min. operation voltage (V)	300/280						200/150
MPPT Range(V) / Rated input voltage(V)	280 - 800/610						200-900/750
Number of MPPT / String per MPPT	2/3			2/4			2/5
Max. DC current (A) Per MPPT x Number of MPPT	25x2	30x2	33x2	33x2	33x2	33x2	42x2
DC switch	Integrated						
Output (AC)							
Rated output power (W)	20000	25000	30000	33000	35000	40000	50000
Max. AC output current(A)	32	40	48	48	48	48	53
Grid voltage range	3/N/PE,230/400V, (320-460V); 3/N/PE,220/380V, (320-460V)				3/N/PE,243/400V, 3/N/PE,277/480V, (357-483V)		3/N/PE,310/540V, (384-552V)
Grid frequency range	50Hz (47-51.5Hz) / 60Hz (57-61.5Hz)						
Power factor	-0.8-+0.8 (adjustable)						
THDi	< 3% (at rated power)						
AC output	Three-phase (L1, L2, L3, N, PE)/(L1, L2, L3, PE)						
System							
Cooling method	Smart cooling						
Max. efficiency	98.40%	98.40%	98.50%	98.50%	98.50%	98.60%	98.60%
Euro-efficiency	98.00%	98.00%	98.00%	98.10%	98.10%	98.20%	98.20%
MPPT efficiency	99.90%						
Protection degree	IP65						
Self-consumption(at night)	<0.5 (W)						
Topology	Transformerless						
Operating temperature range	-25℃-+60℃(derate after 45℃)						
Relative humidity	0-95%, no condensation						
Protection	PV array insulation protection, PV array leakage current protection, Ground fault monitoring,Grid monitoring, Island protection, DC monitoring, Short current protection etc.						
Noise (dB)	< 50						
Display and communication							
Display	3.5 inches LCD display, support backlight display						LED display
LCD language	English, Chinese, German, Dutch						/
Keyboard	Integrated						/
Communication interface	RS485 (standard) ; WiFi, GPRS200(optional)						RS485(standard), WiFi, Etherne(optional), PLC carrier communication (optional)
Mechanical parameters							
Dimension (H x W x D mm)	660x520x250						645x660x425
Weight (kg)	52						57
Installation	Wall mounting						
Others							
DC terminal	Waterproof terminals						
Grid qualification	DIN VDE 0126-1-1: 2013, VDE-AR-N 4105: 2011, DIN VDE V 0124-100: 2012, IEC 61727(IEC62116) , AS/NZS 4777.2: 2015, NB/T32004-2013, IEC 60068-2-1: 2007, IEC 60068-2-2: 2007, IEC 60068-2-14: 2009, IEC 60068-2-30: 2005, IEC 61683: 1999, C10/11: 2012, G59/3-2: 2015, EN 50438: 2013, Leader, ZVRT, PEA						
Safe certificates / EMC certificates	IEC 62109-1 : 2010, IEC 62109-2 : 2011, EN 61000-6-2: 2005, EN 61000-6-3:2007/A1:2011						
Factory warranty	5 years(standard)						

iMars BG

Three Phase Grid-tied Solar Inverter

BG40KTR / 50KTR / 60KTR / 70KTR



Monitoring solution:

WiFi 200
GPRS 200PhoneExpert
InfoExpert
Monitoring Center

SysExpert



Efficient

- Integrated intelligent DC combiner and surge protection improve system flexibility and lower the system cost.
- Max efficiency is up to 98.3%, wide input voltage range, adapt to all kinds of solar panels and string configuration.
- Adopt the latest technologies and combination of T-type three level topologies and SVPWM.



Smart

- AC output power is adjustable between 1-100%.
- Smart grid adaptive to meet the requirements of various power grid accesses.
- Variety of monitoring modes: APP (one-button registration), large screen data monitoring center, cloud monitoring platform.
- Support RS485, GPRS, WIFI, GPRS200.



Reliable

- IP65 protection level, suitable for various installation environments.
- Bus capacitors consist of advanced film capacitors, designed with the latest thermal simulation technology for longer lifespan.
- Insured by well-known international property insurance company (AIG) for Products /Completed Operations Liability Insurance.



Simple

- High power density, small size.
- Modular design, easy to maintain.

Specification

	BG40KTR	BG50KTR	BG60KTR	BG70KTR
Input (DC)				
Max. DC input power (W)	55000	66000	72000	77000
Max. DC input voltage (V)	1100			
Starting voltage (V) / Min. operation voltage (V)	200/570			
MPPT Range(V) / Rated input voltage(V)	570-950/740			
Number of MPPT / String per MPPT	1/10	1/12	1/14	1/14
Max. DC current (A) Per MPPT x Number of MPPT	74x1	90x1	120x1	120x1
DC switch	Integrated			
Output (AC)				
Rated output power (W)	40000	50000	60000	66000
Max. AC output current(A)	64	80	96	96
Grid voltage range	3/N/PE;230/400,310-480Vac			
Grid frequency range	50Hz (47~51.5Hz) / 60Hz (57~61.5Hz)			
Power factor	-0.8~+0.8 (adjustable)			
THDi	< 3% (at rated power)			
AC output	Three-phase (L1, L2, L3, N, PE)/(L1, L2, L3, PE)			
System				
Cooling method	Smart cooling			
Max. efficiency	98.90%	98.90%	99.00%	99.00%
Euro-efficiency	98.50%	98.50%	98.50%	98.50%
MPPT efficiency	99.90%			
Protection degree	IP65			
Self-consumption(at night)	<0.5 (W)			
Topology	Transformerless			
Operating temperature range	-25℃ ~ +60℃(derate after 45℃)			
Relative humidity	0~95%, no condensation			
Protection	PV array insulation protection, PV array leakage current protection, Ground fault monitoring, Grid monitoring, Island protection, DC monitoring, Short current protection etc.			
Noise (dB)	< 60			
Display and communication				
Display	3.5 inches LCD display, support backlight display			
LCD language	English, Chinese, German, Dutch			
Keyboard	Integrated			
Communication interface	RS485 (standard) ; WiFi, GPRS200(optional) , PLC carrier communication(optional)			
Mechanical parameters				
Dimension (H x W x D mm)	810X645X235			
Weight (kg)	53			
Installation	Wall mounting			
Others				
DC terminal	Waterproof terminals, PC(optional)			
Grid qualification	NB/T 3200-2013, TUV, CE, VDE0126-1-1, VDE-AR-N4105, G59/3, C10/11, TF3.2.1, AS/NZS, 4777.2:2015, EN61000-6-1:4, EN61000-6-1:4, EN61000-11:12, IEC62109-1:2010, FEA, ZVRT			
Safe certificates / EMC certificates	VDE-AR-N4105, AS4777/3100, CQC			
Factory warranty	5 years(standard)			

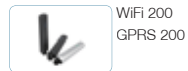
iMars BG

Three phase Grid-tied Solar inverters for US

BG4KTR-US / 5KTR-US / 6KTR-US



Monitoring solution:

WiFi 200
GPRS 200PhoneExpert
InfoExpert
Monitoring Center

SysExpert



Efficient

- The core technologies are from Germany.
- Wider voltage range, lower starting voltage and higher conversion efficiency (Max efficiency can be reach to 98.3%).
- Two MPPT, adapt to the complex environment of roof, improve power generation.
- Adopt the latest technologies and combination of T-type three level topologies and SVPWM.



Smart

- Smart grid adaptive to meet the requirements of various power grid accesses.
- Variety of monitoring modes: APP (one-button registration), large screen data monitoring center, cloud monitoring platform.
- Support RS485,GPRS,WIFI, GPRS200.



Reliable

- Aluminum casing, natural cooling, IP65 protection level.
- Adopt internationally famous brand components to ensure the stable operation of inverter.
- Insured by well-known international property insurance company (AIG) for Products /Completed Operations Liability Insurance



Simple

- Home appliance design, easy to operation.
- Small in size, light in weight, easy to install.

Specification

	BG4KTR-US	BC5KTR-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 input 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 method	Natural cooling		Smart cooling
Max efficiency	97.60%	97.80%	98.20%
Euro-efficiency	97.00%	97.30%	97.60%
MPPT efficiency	99.9%		
Degree of protection	IP65		
Self-consumption (at night)	<1(W)		
Topology	Transformerless		
Operating temperature range	-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 interfaces:	RS485 (Standard), GPRS200, WiFi (Optional)		
Mechanical parameters			
Dimension (H x W x D mm)	530x360x150		
Weight (kg)	20		
Installation	Wall mounting		
Others			
DC terminal	BC03A, BC03B (PV-FT-CF-C-4-300-BU (-); PV-FT-CM-C-4-300-RD (+), Helios H4 4mm ²)		
Factory warranty (years)	5 (standard) / 10, 15, 20 (optional)		

iMars BG

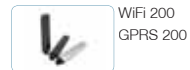
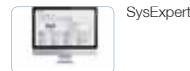
Three phase Grid-tied Solar inverters for US

BG7KTR-US / 9KTR-US / 10KTR-US

BG12KTR-US / 15KTR-US / 17KTR-US



Monitoring solution:

WiFi 200
GPRS 200PhoneExpert
InfoExpert
Monitoring Center

SysExpert



Efficient

- Integrated intelligent DC combiner and surge protection improve system flexibility and lower the system cost.
- Max efficiency is up to 98.3%, wide input voltage range, adapt to all kinds of solar panels and string configuration.
- Dual MPPT work independently and allow unbalanced input power. One MPPT maximum input is up to 60% of Max. DC power.
- Adopt the latest technologies and combination of T-type three level topologies and SVPWM.



Smart

- AC output power is adjustable between 1-100%.
- Smart grid adaptive to meet the requirements of various power grid accesses.
- Variety of monitoring modes: APP (one-button registration), large screen data monitoring center, cloud monitoring platform.
- Support RS485,GPRS,WIFI, GPRS200.



Reliable

- IP65 protection level, suitable for various installation environments.
- Bus capacitors consist of advanced film capacitors, designed with the latest thermal simulation technology for longer lifespan.
- Insured by well-known international property insurance company (AIG) for Products /Completed Operations Liability Insurance.



Simple

- High power density, small size.
- Modular design, easy to maintain.

Specification

	BG7KTR-US	BG9KTR-US	BG10KTR-US	BG12KTR-US	BG15KTR-US	BG17KTR-US
Input (DC)						
Max. DC voltage (V)	1000					
Starting Voltage (V)	200					
Min. Operation Voltage (V)	180			280		
MPPT Operating Voltage Range (V) / Rated input voltage(V)	180-800/610V			280-800/610V		
Rated power voltage range (V)	220 - 800	240 - 800		320 - 800		
Number of MPPT / String Per MPPT	2/3			2/4		
Max. DC Power (W)	7300	9400	10500	12400	15400	17400
Max. DC Current (A) Per MPPT x Number Of MPPT	19 x 2	21 x 2	23 x 2	25 x 2	30 x 2	33 x 2
DC switch	Integrated					
Output (AC)						
Rated power (W)	7000	9000	10000	12000	15000	17000
Max AC Current (A)	20	25	28	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 method	Smart cooling					
Max efficiency	98.20%	98.30%	98.30%	98.30%	98.30%	98.40%
Euro-efficiency	97.60%	97.80%	97.80%	97.80%	97.80%	98.00%
MPPT efficiency	99.9%					
Protection	IP65					
Self-consumption (at night)	<0.5(W)			<1(W)		
Topology	Transformerless					
Operating temperature range	-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 interfaces:	RS485 (Standard), GPRS200, WIFI (Optional)					
Mechanical parameters						
Dimension (H x W x D mm)	610x480x230			660x525x220		
Weight (kg)	38			52		
Installation	Wall mounting					
Others						
DC terminal	BC03A, BC03B (PV-FT-CF-C-4-300-BU (-); PV-FT-CM-C-4-300-RD (+), Helios H4 4mm ²)					
Factory warranty (years)	5 (standard) / 10, 15, 20 (optional)					

Hybrid Inverter

BD3KTL / 5KTL / 3KTL- TD / 5KTL- TD



Monitoring solution:



Efficient

- Professional BMS battery management system, lead-acid battery and lithium iron are compatible.
- Setting battery charging current available according to different battery type.
- Combination of grid and off grid inverter, it not only reserve surplus power on grid status, but also using as UPS when off grid.
- Modular battery design for easy extension.



WiFi 200
GPRS 200



PhoneExpert
InfoExpert
Monitoring Center



Smart

- Friendly HMI, LCD color screen.
- Equipped with variety of communication ways: RS485 (standard), USB (standard), GPRS200 (standard), Wifi (optional), diesel communication interface (optional).



Reliable

- With grid anti feedback function.
- Perfect after-sale service.
- Insured by well-known international property insurance company (AIG) for Products /Completed Operations Liability Insurance.

Specification

	BD3KTL	BD5KTL	BD3KTL-TD	BD5KTL-TD
DC input (PV)				
Max. DC input power (W)	3300	6600	3300	6600
Max. DC input voltage(V)	500			
Starting voltage (V) / Min. operation voltage (V)	100/80			
MPPT Range (V)	120-450			
Max. input current (A)	13A	13A×2	13A	13A×2
Number of MPPT /String per MPPT	1/1	2/1	1/1	2/1
Short circuit current (A)	15.6	15.6×2	15.6	15.6×2
AC output 1 (grid)				
Rated power (W)	3000	4600	3000	4600
Rated grid voltage (V)	208/220/230/240 (single phase)			
Rated grid frequency (Hz)	50/60			
Grid voltage range (V)	180-270			
Grid voltage frequency (Hz)	45-55/55-65			
Rated output current (A)	13	20	13	20
Power factor	≥0.99 (±0.95adjustable)			
THDi	≤3%(at rated power)			
Max. efficiency	97.20%	97.70%	97.20%	97.70%
Euro-efficiency	96.50%	97%	96.50%	97%
AC output 2 (Load)				
Rated output power (kw/kVA)	3000	4600	3000	4600
Rated output voltage (V)	208/220/230/240 (±2%)			
Rated output frequency (Hz)	50/60 (±0.2%)			
Off-network switching time	≤20ms			
Voltage harmonic distortion	≤3%(rated power)			
Peak power/duration	150%/10S			
Battery				
Rated voltage (V)	48			
Voltage range(settable) (V)	40-60			
Battery type	Lithium battery or Lead-acid battery			
Battery capacity	/		2.4kWh-12kWh(adjustable)	
Max. charging current(settable) (A)	60	100	60	100
Max. discharging current(settable)(A)	60	100	60	100
Max. efficiency	94%			
Others				
Isolation method (photovoltaic side)	Not isolation			
Isolation method (battery side)	High-frequency isolation			
Range of working temperature	-10°C ~ +40°C		-25 ~ +50°C (40°Cderating begins)	
Cooling method topology	Air cooling			
Degree of protection / Altitude (m)	IP20 / <1000m;		IP54/<1000m;	
Relative humidity	0-95%, no condensation			
Noise (dB)	≤50			
Protection	PV array insulation protection, PV array leakage current protection, Ground fault monitoring,Grid monitoring, Island protection, DC monitoring, Short current protection etc.			
Display	LCD			
Communication interface	RS485(standard), Wifi(optional), GPRS(optional), CAN-BUS(internal communication), USB, Genset			
Dimension (H x W x D mm)	610x425x190		1300x650x440	
Weight (kg)	19		99	
Installation	Wall mounting		Standing	
Grid standard	VDE-AR-N4105, AS/NZS 4777.2:2015, NB/T 32004-2013			
Ground fault alarm	Built-in buzzer			
Safe certificate /EMC certificates	IEC 62109-1 : 2010, IEC 62109-2 : 2011, EN 61000-6-2: 2005			
Factory warranty (years)	1(standard) / 3 (optional)			

iMars BN single-phase off-grid Inverter

BN1012C / 1024C / 1512C / 1524C / 2012C / 2024C(E)



Monitoring solution:



PhoneExpert
InfoExpert
Monitoring Center



Efficient

- Multiple charging voltage grades to adapt to more battery topology, to maximize battery performance.
- Multiple working mode are optional for different working priority (Grid / battery / energy saving mode).
- Electricity bypass quick charging function.
- Solar panel MPPT charging technology.



Smart

- User-friendly multiple communication module (RS485, RS232, CAN, GPRS, WIFI) are optional to be compatible with more monitoring device: mobile, computer, internet/remote operation.



Reliable

- Over-load and short-circuit protection.
- Capable of providing the continuous power to linear load or not-linear load of lamp, computer, fridge, air-conditioner, fans, and household appliances and industrial power.
- Insured by well-known international property insurance company (AIG) for Products /Completed Operations Liability Insurance.

Specification

	BN1012C/E	BN1024C/E	BN1512C/E	BN1524C/E	BN2012C/E	BN2024C/E
Line mode						
AC input voltage (V)	220/230/240					
AC output voltage range (V)	155~272 (±2%)					
Rated frequency (Hz)	50Hz/ 60Hz (auto detection)					
Frequency range (Hz)	47+0.3Hz ~ 55+0.3Hz for 50Hz; (57+0.3Hz ~ 65+0.3Hz for 60Hz)					
Over-load/Short-circuit protection	Circuit breaker					
Efficiency	>95%					
Transfer time (ms)	(AC to DC or DC to AC):10ms (typical)					
Bypass relay current (A)	30					
Invert mode						
Output voltage waveform	Sine wave					
Rated output power (VA)/(W)	1000/1000		1500/1500		2000/2000	
Power factor	1					
Rated output voltage (V)	220/230/240(±10%)					
Rated Output frequency (Hz)	50Hz ±0.3Hz/60Hz ± 0.3Hz					
Efficiency	>88%					
Over-load protection	(110%<load<125%) ±10%: Fault(shutdown output) after 15min; (125%<load<150%) ±10%: Fault(shutdown output) after 60s;load>150% ±10%:Fault(shutdown output) after 20s					
Peak power (10s) (VA)	3000		4500		6000	
Capable of starting electric motor (HP)	1					
Output short-circuit protection	Current limit (Fault after 10s)					
Output breaker current (A)	10			30		
DC input voltage (V) Min. DC start voltage (V)	12VDC mode:12/11; 24VDC mode:24/22					
DC input voltage range (V)	10.0~16.0, ±0.6Vdc: 12VDC mode(*2 is 24VDCinput mode,*4 is 48VDC input mode) (12VDC mode: low alarm: 10.5V; shut down: 10V; high fault: 16V; high recovery: 15.5V)					
Main operating mode	0-6 level: electricity first; 7-9 level battery first					
Charge (Line)						
Charge current (A)	35	20	45	25	65	35
Charge current regulation (A)	± 5					
Battery voltage range (V)	12VDC mode: 10-15.7; 24VDC mode: 20-31.4					
Charge short-circuit protection	Circuit breaker					
Breaker current (A)	10			30		
Over charge protection	Bat. V ≥ 15.7 is 12VDC mode>(*2 is 24VDC input mode,*4is 48VDC mode)every 1s & fault after 60s					
Charge (Solar) (E series is not included)						
MPPT voltage range (V)	12VDC mode: 15-55; 24VDC mode: 18-78					
Max. PV input voltage (V)	12VDC mode: 70; 24VDC mode: 100					
Max. PV open circuit voltage (V)	12VDC mode: 56; 24VDC mode: 80					
Rated charge current (A)	45					
Max. full load charging efficiency	98%					
Battery short-circuit protection	Fuse					
Solar panel wiring protection	Anti reverse connecting protection					
Others						
Dimension (H x W x D mm)	410 x 264 x 180			460 x 264 x 180		
Weight (kg)	15.7	16	19.9	19	21.9	22
Degree of protection	IP20 (forced air, variable speed fan)					
Operating temperature range	-15°C to 40°C (-25°C-60°C for storage)					
Relative humidity	5% to 95%					
Communication interface	RS-485/GPRS/WIFI					
Safe certificate / EMC certificates	CE (EN62040-1, EN62040-2) / C2					
Factory warranty (years)	1					

iMars BN single-phase off-grid Inverter

BN3012C / 3024C / 4048C / 5048C / 6048C (E)



Monitoring solution:



PhoneExpert
InfoExpert
Monitoring Center



Efficient

- Multiple charging voltage grades to adapt to more battery topology, to maximize battery performance.
- Multiple working mode are optional for different working priority (Grid / battery / energy saving mode).
- Electricity bypass quick charging function.
- Solar panel MPPT charging technology.



Smart

- User-friendly multiple communication module (RS485, RS232, CAN, GPRS, WIFI) are optional to be compatible with more monitoring device: mobile, computer, internet/remote operation.



Reliable

- Over-load and short-circuit protection.
- Capable of providing the continuous power to linear load or not-linear load of lamp, computer, fridge, air-conditioner, fans, and household appliances and industrial power.
- Insured by well-known international property insurance company (AIG) for Products /Completed Operations Liability Insurance.

Specification

	BN3012C/E	BN3024C/E	BN4048C/E	BN5048C/E	BN6048C/E
Line mode					
AC input voltage (V)	220/230/240				
AC output voltage range (V)	155~272 (± 2%)				
Rated frequency (Hz)	50Hz/ 60Hz (auto detection)				
Frequency range (Hz)	47+0.3Hz ~ 55+0.3Hz for 50Hz; (57+0.3Hz ~ 65+0.3Hz for 60Hz)				
Over-load/Short-circuit protection	Circuit breaker				
Efficiency	>95%				
Transfer time (ms)	(AC to DC or DC to AC):10ms (typical)				
Bypass relay current (A)	30			40	
Invert mode					
Output voltage waveform	Sine wave				
Rated output power (VA)/(W)	3000/3000	4000/4000	5000/5000	6000/6000	
Power factor	1				
Rated output voltage (V)	220/230/240 (± 10%)				
Rated Output frequency (Hz)	50Hz ± 0.3Hz/60Hz ± 0.3Hz				
Efficiency	>88%				
Over-load protection	(110%<load<125%) ± 10%: Fault(shutdown output) after 15min; (125%<load<150%) ± 10%: Fault(shutdown output) after 60s;load>150% ± 10%:Fault(shutdown output) after 20s				
Peak power (10s) (VA)	11000	12000	15000	18000	
Capable of starting electric motor (HP)	2	3	4	5	
Output short-circuit protection	Current limit (Fault after 10s)				
Output breaker current (A)	30			40	
DC input voltage (V)/ Min. DC start voltage (V)	12VDC mode: 12/11 ; 24VDC mode: 24/22		48/ 44		
DC input voltage range (V)	10.0~16.0, ± 0.6Vdc: 12VDC mode(*2 is 24VDCinput mode,*4 is 48VDC input mode) (12VDC mode: low alarm: 10.5V; shut down: 10V; high fault: 16V; high recovery: 15.5V)				
Main operating mode	0~6 level: electricity first; 7~9 level battery first				
Charge (Line)					
Charge current (A)	75	50	35	40	50
Charge current regulation (A)	± 5				
Battery voltage range (V)	12VDC mode: 10~15.7 ; 24VDC mode: 20 ~ 31.4		40 - 62.8		
Charge short-circuit protection	Circuit breaker				
Breaker current (A)	30			40	
Over charge protection	Bat. V ≥ 15.7 is 12VDC mode,*2 is 24VDC input mode,*4is 48VDC mode)every 1s & fault after 60s				
Charge (Solar)(E series is not included)					
MPPT voltage range (V)	12VDC mode:15~55 ; 24VDC mode:18~78		50~145		
Max. PV input voltage (V)	12VDC mode: 70 ; 24VDC mode: 100		200		
Max. PV open circuit voltage (V)	12VDC mode:56 ; 24VDC mode:80		145		
Rated charge current (A)	45		60		
Max. full load charging efficiency	98%				
Battery short-circuit protection	Fuse				
Solar panel wiring protection	Anti reverse connecting protection				
Others					
Dimension (H x W x D mm)	460 x 264 x 180		510x 264 x 180	555x 264 x 180	
Weight (kg)	26.3	26	28	33.5	35
Degree of protection	IP20 (forced air, variable speed fan)				
Operating temperature range	-15° C to 40° C (-25°C~60°C for storage)				
Relative humidity	5% to 95%				
Communication interface	RS-485/GPRS/WiFi				
Safe certificate / EMC certificates	CE (EN62040-1, EN62040-2) / C2				
Factory warranty (years)	1				

Solar Pumping Inverter

BPD0K7TNAC / 1K5TNAC / 2K2TNAC / 004TNAC



Monitoring solution:



Keypad



WiFi 200
GPRS 200



PhoneExpert
InfoExpert
Monitoring Center



Efficient

- Support driving single-phase motor and three-phase 220V motor.
- One pump inverter can be connected with multiple pumps, support vector control.
- Optional water level detection and diesel engine start/stop module.
- Wider operation voltage range, multi PV strings configuration and modules is possible, save PV module cost.



Smart

- Digital intelligent control can flexibly adjust and set the pump speed range.



Reliable

- IP65 and no fan design, with convenient installation, maintenance free.
- Soft start function, providing lightning protection, overvoltage, over current, overload protection function etc.

Specification

	BPD0K7TNAC	BPD1K5TNAC	BPD2K2TNAC	BPD004TNAC
Input (DC)				
Max. DC voltage(V)	450			
Starting voltage (V)	80	100		
Minimum working voltage (V)	60	80		
MPPT Operating Voltage Range (V)	80-400	100-400		
Number of MPPT	1			2
Max. DC Current (A)	9	12	20	
Bypass input (AC)				
Input voltage(Vac)	220/230/240(1PH)-15%+10%			
Input frequency (Hz)	47-63			
Input connect method	1P2L(L,N,PE)			
Output (AC)				
Rated power (W)	750	1500	2200	4000
Rated current (A)	5.1 (1PH)	10.2 (1PH)	14 (1PH)	25 (1PH)
	4.2 (3PH)	7.5 (3PH)	10 (3PH)	16 (3PH)
Output connect method	1P2L/2P3L/3P/3L			
Output frequency (Hz)	1-400			
Performance				
Control mode	V/F			
Topology of motor	Asynchronous machine			
Other parameter				
Dimension(H*W*Dmm)	255*300*137			410*360*160
Weight (Kg)	6.4	7	13	
Degree of protection	IP65			
Cooling method	Natural cooling			
HMMI	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 (m)	3000m (more than 2000m derating)			
Design life	5 years(warranty 18months)			
Recommended solar array configuration				
250Wp (Open-circuit voltage 38V±3V)	5x1	8x1	10x1	10x2
300Wp (Open-circuit voltage 45V±3V)	4x1	7x1	8x1	8x2

Anti-feedback Device

ATF200-A / ATF200-B



Current Transformer

- Suspension installation, crimp terminal output. Mechanical strength: the number of switching is not less than 1000 times.

Single Phase Energy Meter

. 35mm DIN installing, in accordance with Standard DIN ED50022.

- Measure and display V, I, P, kWh value, High accuracy, active energy accuracy up to class 1
- LED indicates pulse, Passive pulse output, output signal is in accordance with Standard DIN43864.
- LCD Display, good reliability, compact size, light weight, specious nice appearance and easy installation.

Three Phase Energy Meter

- High accuracy, active energy accuracy up to class 1
- LED indicates pulse (Settable for kWh or kvarh), 2 Passive pulse output, output signal is in accordance with Standard DIN43864
- Record historical energy for last 31days, last 12 month and last 10 years
- Measure and display U, I, P, PF, F, Hz,kWh, kvarh, Multi-tariff energy value , with good reliability, compact size, light weight, specious nice appearance and easy installation.

Specification

Current Transformer			Single Phase Energy Meter	Three Phase Energy Meter
Rated input	200A	Rated voltage	230Vac, direct	3×220Vph-N, direct,3×120Vph-N, direct (optional)
Max. detection input	240A	Rated (Max.) current	5(6)A direct	3×5(6) A/ CT, 3×5(6) direct
Rated output	5A	Input frequency	50Hz or 60Hz	
Accuracy	±1%	Power supply	self-supply 230V, (184V-275V)	self-supply, 220V, (176V-275V), 120V, (96V-140V), If only connect 1 phase, RS485 port will not work.
Linearity	≤0.2%	Starting current	0.4%Ib	
Turns ratio	1:40	Power consumption	<2W	<10W
Phase shift	/	Insulating property	Power frequency withstand voltage: AC 2 KV, Impulse withstand voltage: 6KV	
Max.Sampling resistance	2 Ω	Accuracy	Class 1 (IEC 62053-21:2003)	
Work voltage	660V	Pulse output	1000imp/kWh	
Work frequency	50/60Hz	Communication	RS485 output, Modbus-RTU protocol, Address: 1~247, Baudrate: 2400bps, 4800bps, 9600bps	
Operating temperature	- 25℃~+60℃	Connection mode	1-phase 2-wire	3-phase 4-wire
Storage temperature	- 30℃~+90℃	Dimension	36 × 100 × 65mm	72×100×65mm
Dielectric strength 50 Hz 1 min	3.5KV	Installation mode	Standard 35mm DIN rail	
Fire resistance	UL94-V0	Operating environment	Operating temperature: -20℃~+55℃, Storage temperature: -25℃~+70℃, Relative humidity: 5%~95%,non-condensing	Operating temperature: -10℃~+55℃, Storage temperature: -40℃~+70℃, Relative humidity: 5%~95%, non-condensing
Material of core	Silicon steel sheet	Electrostatic discharge immunity test	IEC61000-4-2,Level 4	
Mounting type	Suspension	Radiated immunity test	IEC61000-4-3,Level 3	
Weight	204g	Electrical fast transient/burst immunity test	IEC61000-4-4,Level 4	
		Surge immunity test (1,2/50μs-8/20μs)	IEC61000-4-5,Level 4	
		Conducted Emissions	EN55022, Class B	
		Radiated Emissions	EN55022, Class B	

Data WebBox



Features

- Support up to 16 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

Specification

Parameter	
Max.Supported Device	1-16
Inverter Interface	RS-485
Remote Communication Interfaces:	GPRS, GPRS200, 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, GPRS200
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°C ~ 85°C
Operating temperature range	-10 °C~ 65°C
Working Humidity	10%-90% Relative humidity, no condensation
Storage Humidity	< 40%
Degree of protection	IP21
Physical Parameters	
Size	150mm x 80mm x 26mm
Weight	1.1KG
Installation	Class II

Monitoring Modules

iMars Wifi200 / GPRS200



Handheld HMI



Features

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

Product Description

iMars Wifi200/GPRS200 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).



iMars PhoneExpert
(for IOS)



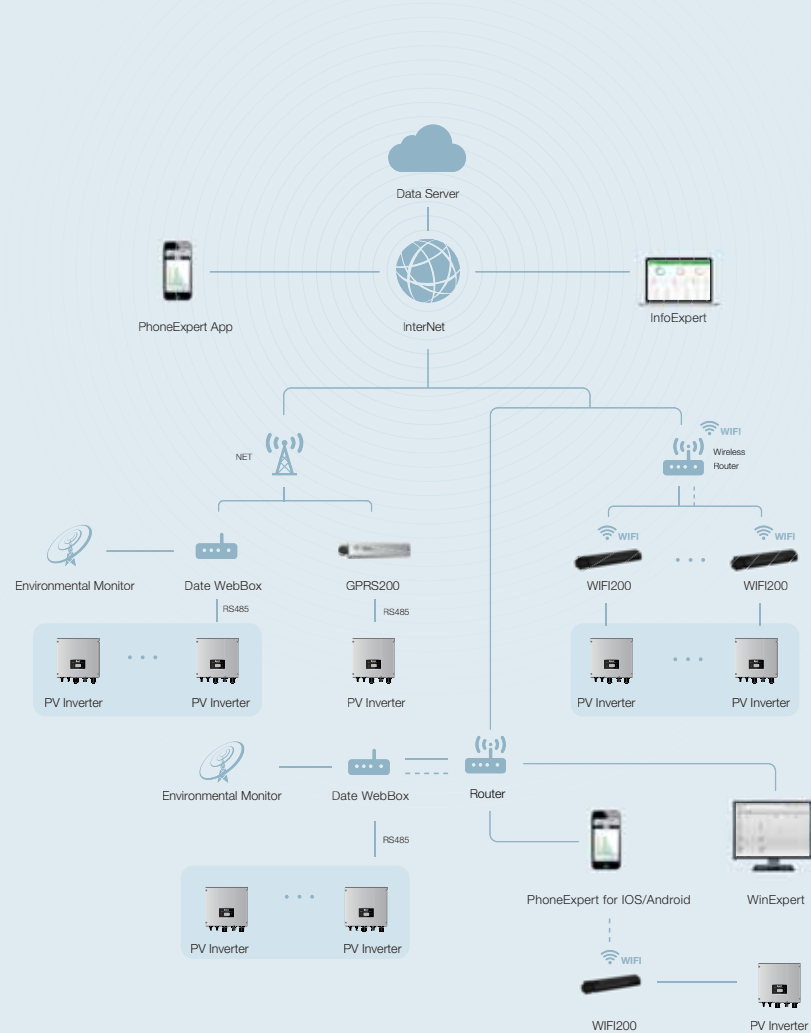
iMars PhoneExpert
(for Android)

Specification

Serial Port	RS485 Waterproof Plug
WiFi 200 Transmission Distance	30m(no barrier)
GPRS 200 Transmission Distance	unlimited
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	139mmx31.7mmx21mm

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.

Operation & Maintenance Platform



iMars
WinExpert
(for Windows)



iMars
PhoneExpert

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.

Features

Multi-level User Management

- Administrator authority: change software settings and modify system configuration.
- Guest authority: browse software settings and system parameters.

User-friendly Interface

- Simple menu bar and browser window;
- Can be zoomed out to the sticker window;

Powerful Analysis Capabilities

- Power output per day, month, year and total;
- CO₂ emission reduction, power generation profit;

Solar System Design Software



iMars
SysExpert

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.

Features

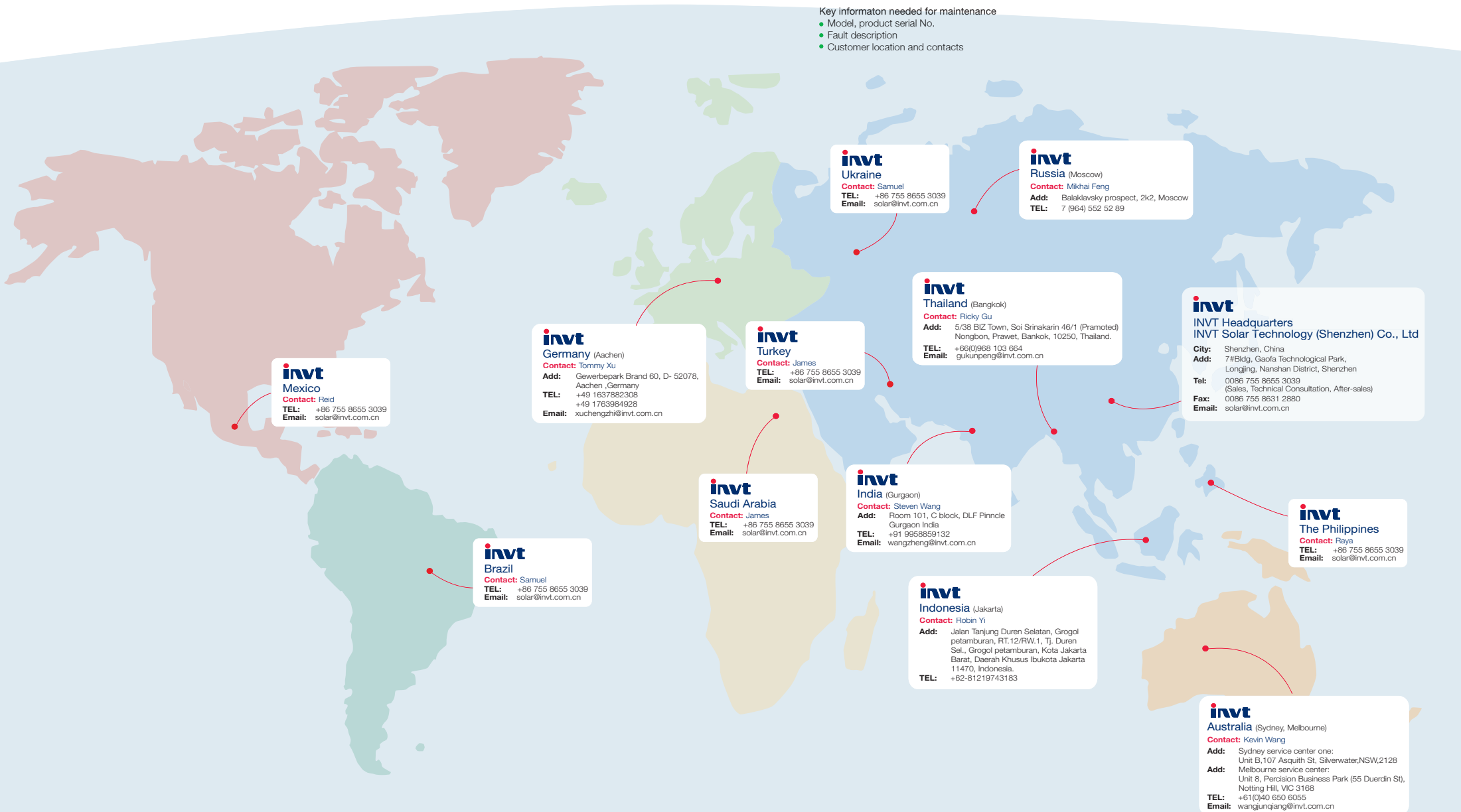
- User-friendly Interface;
- Three-step design process;
- Professional design report;
- Constantly updated database support;
- Powerful system of mathematical analysis model;

Our service

Acceptance method	Contact	Service Region	Service Time	Remark
Web Declaration	www.invt-solar.com	Global	7*24hour	Recommended
Email	solar-service@invt.com.cn	Global	7*24hour	Recommended

Key information needed for maintenance

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



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Applications



Location: Australia
Capacity: 3kW
Model: MG3KTL



Location: Australia
Capacity: 5kW
Model: MG5KTL



Location: Chengde, China
Capacity: 2.4MW
Model: MG3KTL



Location: Australia
Capacity: 10kW
Model: MG5KTL-2M



Location: Switzerland
Capacity: 580kW
Model: BG33KTR



Location: The Netherlands
Capacity: 600kW
Model: BG35KTR



Location: Taiwan, China
Capacity: 100kW
Model: BG30KTR



Location: The Netherlands
Capacity: 210kW
Model: BG30KTR



Location: Australia
Capacity: 35kW
Model: MG5KTL



Location: Hunan, China
Capacity: 300kW
Model: BG30KTR



Location: Jiangsu, China
Capacity: 3MW
Model: BG30KTR



Location: Zhejiang, China
Capacity: 2.1MW
Model: BG50KTR



Location: Anhui, China
Capacity: 3.2MW
Model: BG50KTR



Location: Australia
Capacity: 2.3MW
Model: BG35KTR



Location: Zhejiang, China
Capacity: 2.1MW
Model: BG35KTR