

# iMars Series

## Solar Inverter Catalog

Powered by Solar

Power by solar



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Y9/1-02(V1.0)



G83/G59 C10/11 PEA MEA VDE4105



Stock Code: 002334

Top 10 PV Inverter Suppliers

Best Influential Brand in 2018

National High-tech Enterprise

Outstanding Green Contribution Award

Global Top 500 New Energy Enterprises

Industrial and Commercial PV Leading Brand of China

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### Guangming Technology Industrial Park (HQ)

With covering a floor area of 13,800 m<sup>2</sup> and building area of 34,700 m<sup>2</sup>, 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 is made up of office, R&D, Sales and production with a three-dimensional greening design.



## COMPANY PROFILE

- Founded in **2002**, listed in stock in **2010**.
- **12** R&D centers, more than **1050** patents, a laboratory qualified with CNAS, ACT from TUV-SUD, WTDP-UL.
- **16** subsidiaries, **2** manufacturing bases, over **3000** employees.
- Products exported to more than **60** countries and districts.
- **9** Overseas Subsidiaries:  
Russia, India, Thailand, UAE, Italy, UK, Germany, Australia, Mexico.
- **Business:**  
Grid-tied solar inverter, off-grid inverter, hybrid inverter, energy storage converter, solar pumping inverter, EV charging pile, UPS, etc.

### Suzhou Industrial Park

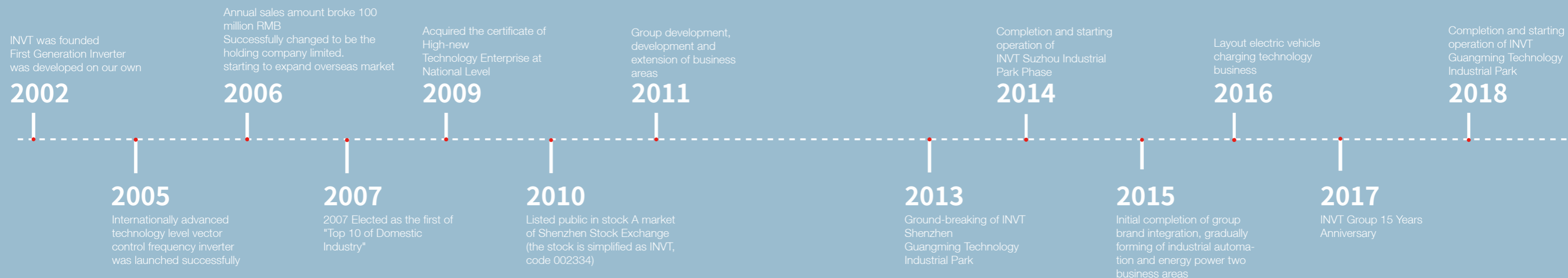
With more than one hundred and thirty thousand square meters covered area, it locates in Science and Technology City of high-tech zone, Suzhou, China. The building area of factory has over 40,000 m<sup>2</sup> for the production line. In order to promote the new concept of energy conservation, Suzhou 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.







## Development History



## Corporate Culture

- 1 Vision**  
To be the globally leading and respected provider for products and services of industrial automation and electric power.
- 2 Mission**  
Make all efforts to offer value-added products and services to strengthen client's competitive advantages.



- 3 Core Value**  
Work together and keep improving.
- 4 Business Concept**  
Sincere, Credit standing, Professional and Ambitious.
- 5 Business Policy**  
market-oriented and customer-centric.



# Our Advantage

## R&D (Research and Development)

INVT regards research and development innovation as vitalities of the company. In order to make the products and solutions of INVT more and more perfect, INVT builds the core competitiveness of the company and creates the value of the customer's society through strategic implementation such as independent innovation, operational excellence management and human resource development. In order to realize the value of technology, the brand and quality of INVT have been achieved.

17 years of technical accumulation

12 R&D centers

8 laboratories

More than 1050 pcs of patents



- The National CNAS Laboratory.
- The UI Eyewitness Laboratory Qualification.
- TUV Eyewitness Laboratory Qualification.
- The First Industrial Control Industry To Add Mark TUV-mark Manufacturers In China.
- The First Industrial Control Industry To Obtain The Act Qualification From TUV In China.



# Enterprise Honor

We are not only pursuing honors, but also pursuing customer recognition. Every glory is not only an affirmation but also an inspiration to us. It makes our pace more determined.

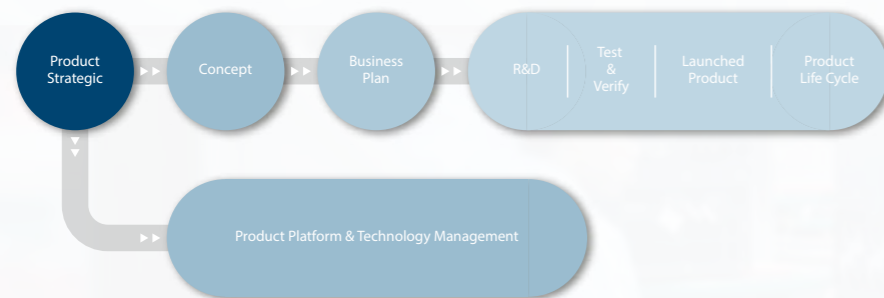
- Global Top 500 New Energy Enterprises
- Best Solar-Storage-Charge Integration Solution Award of China's Energy Storage Industry in 2018
- Best Energy Storage Industry Supplier Award of China's Energy Storage Industry in 2018
- National High-tech Enterprise
- Outstanding Green Contribution Award
- Industrial and Commercial PV Leading Brand of China
- Top 10 Most Popular PV Residential System Brands in 2018
- Top 10 Most Popular PV Distributed Inverter Brands in 2018
- Top 10 Most Popular PV Storage Inverter Brand Suppliers in 2018
- CREC Excellent Inverter Enterprise in 2018
- Top 10 PV Inverter Suppliers
- Best Influential Brand in 2018





# Why INVT Solar

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



## Reliable Product Design

- 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.

## Strict Product Quality Control

- More than 17 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

- 7x24 service.
- 24 hours quick response.
- The products are insured by well-known international property insurance company (AIG) for Products/Completed Operations Liability insurance.

## Suppliers





# iMars Inverter

|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Off-grid       | <p><b>Off-grid Inverter</b></p>  <p>BN1012C/E<br/>BN1024C/E<br/>BN1512C/E<br/>BN1524C/E<br/>BN2012C/E<br/>BN2024C/E</p>  <p>BN3012C/E<br/>BN3024C/E<br/>BN4048C/E<br/>BN5048C/E<br/>BN6048C/E</p> <p><b>Solar Pumping Inverter</b></p>  <p>BPD0K7TN(AC)<br/>BPD1K5TN(AC)<br/>BPD2K2TN(AC)<br/>BPD004TNAC<br/>BPD2K2TRAC<br/>BPD004TRAC<br/>BPD5K5TRAC</p>                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Energy Storage | <p><b>Hybrid Inverter</b></p>  <p>BD3KTL<br/>BD5KTL</p> <p><b>All-in-one Hybrid System</b></p>  <p>BD3KTL-HS<br/>BD5KTL-HS</p> <p><b>Energy Storage Inverter</b></p>  <p>BD3KTL-PS</p> <p><b>Energy Storage Converter</b></p>  <p>BD50KTR<br/>BD100KTR<br/>BD250KTR<br/>BD500KTR<br/>BD630KTR</p> <p>BD3KTL-MR<br/>BD4KTL-MR<br/>BD5KTL-MR</p>  <p>BD3KTL-TD<br/>BD5KTL-TD</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Grid-tied      | <p><b>Single Phase Grid-tied Inverter</b></p>  <p>MG750TL<br/>MG1KTL<br/>MG1K5TL<br/>MG2KTL<br/>MG3KTL</p>  <p>MG4KTL<br/>MG4K6TL<br/>MG5KTL</p>  <p>MG3KTL-2M<br/>MG4KTL-2M<br/>MG4K6TL-2M<br/>MG5KTL-2M<br/>MG6KTL-2M</p> <p><b>Residential 0.75-6KW</b></p>                                                                                                                                                                                                                                                                                | <p><b>Three Phase Grid-tied Inverter</b></p>  <p>BG4KTR<br/>BG4KTR-S<br/>BG5KTR<br/>BG5KTR-S<br/>BG6KTR<br/>BG8KTR<br/>BG10KTR</p>  <p>BG12KTR<br/>BG15KTR<br/>BG17KTR</p>  <p>BG20KTR<br/>BG25KTR<br/>BG30KTR<br/>BG33KTR<br/>BG35KTR<br/>BG40KTR-HV<br/>BG50KTR-HV</p>  <p>BG40KTR<br/>BG50KTR<br/>BG60KTR<br/>BG70KTR</p> <p><b>Commercial/Plant 4-70KW</b></p> |

# Monitoring

Module



Handheld HMI



Inverter Logger



Stick Logger  
WIFI/GPRS/5G/ETHERNET

Software



Monitoring Platform



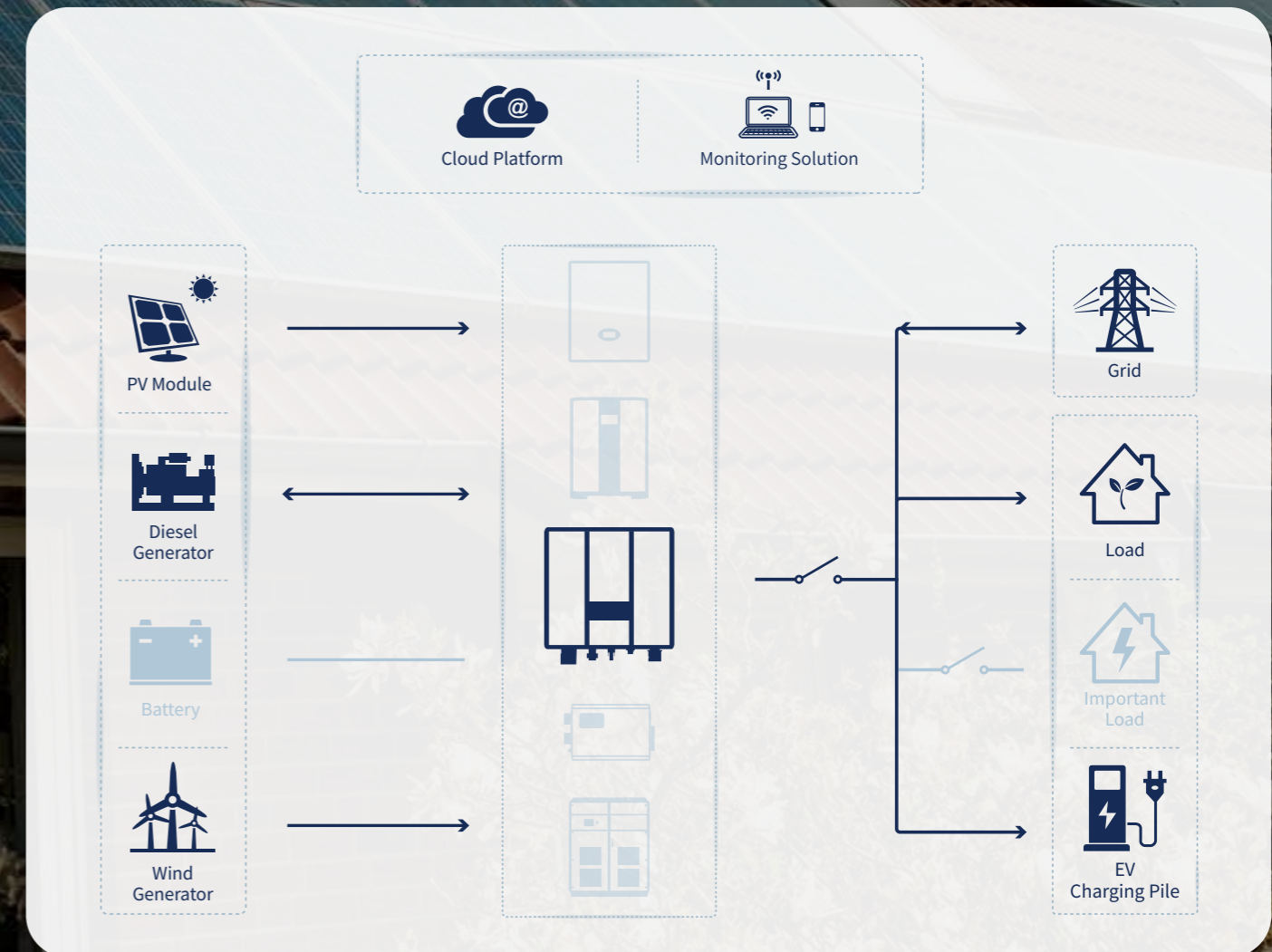
# Single Phase Grid-tied Solar Inverter



MG750TL  
MG1KTL  
MG1K5TL  
MG2KTL  
MG3KTL

MG4KTL  
MG4K6TL  
MG5KTL

MG3KTL-2M  
MG4KTL-2M  
MG4K6TL-2M  
MG5KTL-2M  
MG6KTL-2M





# iMars MG

MG750KTL | MG2KTL  
MG1KTL | MG3KTL  
MG1K5TL



WiFi  
GPRS  
5G  
ETHERNET



Handheld  
HMI



Monitoring  
Solution

## Efficient

- Wider voltage range, lower starting voltage and higher conversion efficiency.
- External inductor, reduce internal temperature.

## Smart

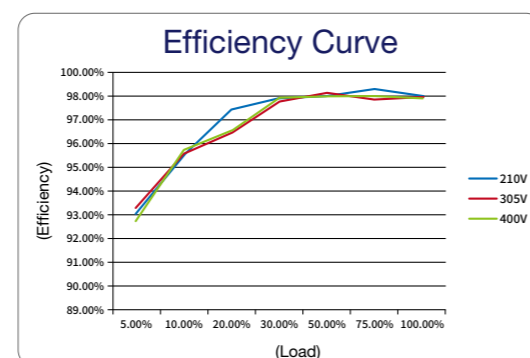
- Grid self-adaptation to meet various grid access requirements.
- Integrated global monitor management, APP with one-button registration, HMI is optional.

## Reliable

- Aluminum casing, natural cooling, IP65 protection level.
- International famous brand components to ensure stable operation.

## Simple

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



|                                                      | MG750TL                                                                                                                                                                                                                                                                   | MG1KTL | MG1K5TL                | MG2KTL  | MG3KTL  |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------------------|---------|---------|
| <b>Input (DC)</b>                                    |                                                                                                                                                                                                                                                                           |        |                        |         |         |
| Max. DC input power (W)                              | 900                                                                                                                                                                                                                                                                       | 1200   | 1700                   | 2200    | 3300    |
| Max. DC input voltage (V)                            | 400                                                                                                                                                                                                                                                                       |        | 450                    |         | 500     |
| Starting voltage (V) /<br>Min. operation voltage (V) | 60/50                                                                                                                                                                                                                                                                     |        | 80/60                  |         |         |
| MPPT range (V)                                       | 50-400                                                                                                                                                                                                                                                                    | 60-400 | 80-410                 | 100-410 | 120-450 |
| Number of MPPT /<br>String per MPPT                  |                                                                                                                                                                                                                                                                           |        | 1/1                    |         |         |
| Max. DC current (A) per MPPT x<br>Number of MPPT     | 8x1                                                                                                                                                                                                                                                                       | 9x1    | 10x1                   | 12x1    | 15x1    |
| <b>Output (AC)</b>                                   |                                                                                                                                                                                                                                                                           |        |                        |         |         |
| Rated output power (W)                               | 750                                                                                                                                                                                                                                                                       | 1000   | 1500                   | 2000    | 3000    |
| Max. AC output current (A)                           | 3.6                                                                                                                                                                                                                                                                       | 4.5    | 6.5                    | 9       | 13      |
| Power factor                                         |                                                                                                                                                                                                                                                                           |        | ≥0.99(at rated power)  |         |         |
| THDi                                                 |                                                                                                                                                                                                                                                                           |        | <3%(at rated power)    |         |         |
| Nominal output voltage (V) /<br>Frequency            |                                                                                                                                                                                                                                                                           |        | 230, L+N+PE, 50Hz/60Hz |         |         |
| <b>Efficiency</b>                                    |                                                                                                                                                                                                                                                                           |        |                        |         |         |
| 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%                 |         |         |
| <b>Protection</b>                                    |                                                                                                                                                                                                                                                                           |        |                        |         |         |
| Protection                                           | DC breaker, AC short-circuit protection, Over current protection, Over voltage protection, Isolation protection, RCD, Surge protection, Anti-island protection, Over-temperature protection, Ground fault monitoring, etc.                                                |        |                        |         |         |
| <b>General data</b>                                  |                                                                                                                                                                                                                                                                           |        |                        |         |         |
| Display                                              | LED(standard)/LCD (optional)                                                                                                                                                                                                                                              |        |                        |         |         |
| LCD language                                         | English, Chinese, German, Dutch                                                                                                                                                                                                                                           |        |                        |         |         |
| Communication interface                              | RS485(standard); WiFi, Ethernet(optional)                                                                                                                                                                                                                                 |        |                        |         |         |
| Cooling method                                       | Natural cooling                                                                                                                                                                                                                                                           |        |                        |         |         |
| Protection degree                                    | IP65                                                                                                                                                                                                                                                                      |        |                        |         |         |
| Night self-consumption (W)                           | <1                                                                                                                                                                                                                                                                        |        |                        |         |         |
| Topology                                             | Transformerless                                                                                                                                                                                                                                                           |        |                        |         |         |
| Operating temperature range                          | -25°C~+60°C(derate after 45°C)                                                                                                                                                                                                                                            |        |                        |         |         |
| Relative humidity                                    | 4~100%, condensation                                                                                                                                                                                                                                                      |        |                        |         |         |
| Dimension (H x W x D mm)                             | 280x300x138                                                                                                                                                                                                                                                               |        |                        |         |         |
| Weight (kg)                                          | ≤9.5                                                                                                                                                                                                                                                                      |        |                        |         |         |
| Grid qualification                                   | DIN VDE 0126-1-1:2013, VDE-AR-N 4105:2011, DIN VDE V 0124-100:2012, EN 50438:2013, G83-2:2012, 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 61683:1999, C10/11, TF3.2.1 |        |                        |         |         |
| Safety certificate /<br>EMC certificates             | IEC 62109-1:2010, IEC 62109-2:2011, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011                                                                                                                                                                                          |        |                        |         |         |
| Warranty (years)                                     | 5(standard)/10(optional)                                                                                                                                                                                                                                                  |        |                        |         |         |

# iMars MG

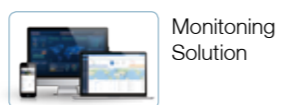
MG4KTL | MG5KTL  
MG4K6TL



WiFi  
GPRS  
5G  
ETHERNET



Monitoring  
Platform



Monitoring  
Solution

## Efficient

- Wider voltage range, lower starting voltage and higher conversion efficiency.
- External inductor, reduce internal temperature.

## Smart

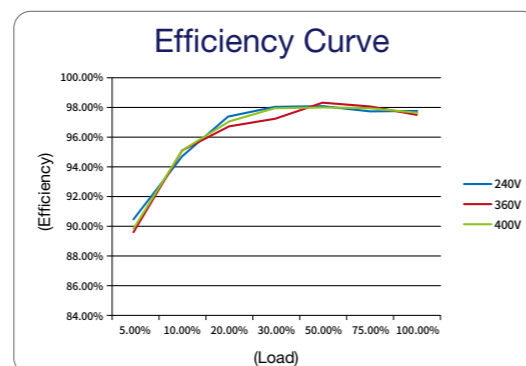
- Grid self-adaptation to meet various grid access requirements.
- Integrated global monitor management, APP with one-button registration, HMI is optional.

## Reliable

- Aluminum casing, natural cooling, IP65 protection level.
- International famous brand components to ensure stable operation.

## Simple

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



|                                                      | MG4KTL                                                                                                                                                                                                                                                  | MG4K6TL | MG5KTL |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|
| <b>Input (DC)</b>                                    |                                                                                                                                                                                                                                                         |         |        |
| Max. DC input power (W)                              | 4800                                                                                                                                                                                                                                                    | 5520    | 6000   |
| Max. DC input voltage (V)                            | 600                                                                                                                                                                                                                                                     |         |        |
| Starting voltage (V) /<br>Min. operation voltage (V) | 120/100                                                                                                                                                                                                                                                 |         |        |
| MPPT range (V)                                       | 120-550                                                                                                                                                                                                                                                 |         |        |
| Number of MPPT /<br>String per MPPT                  | 1/2                                                                                                                                                                                                                                                     |         |        |
| Max. DC current (A) per MPPT x<br>Number of MPPT     | 16x1                                                                                                                                                                                                                                                    | 18x1    | 20x1   |
| <b>Output (AC)</b>                                   |                                                                                                                                                                                                                                                         |         |        |
| Rated output power (W)                               | 3680                                                                                                                                                                                                                                                    | 4200    | 4600   |
| Max. AC output current (A)                           | 16                                                                                                                                                                                                                                                      | 18.3    | 20     |
| Power factor                                         | ≥0.99(at rated power)                                                                                                                                                                                                                                   |         |        |
| THDi                                                 | <3%(at rated power)                                                                                                                                                                                                                                     |         |        |
| Nominal output voltage (V) /<br>Frequency            | 230, L+N+PE, 50Hz/60Hz                                                                                                                                                                                                                                  |         |        |
| <b>Efficiency</b>                                    |                                                                                                                                                                                                                                                         |         |        |
| Max. efficiency                                      | 97.70%                                                                                                                                                                                                                                                  | 97.70%  | 97.80% |
| Euro-efficiency                                      | 96.70%                                                                                                                                                                                                                                                  | 96.70%  | 96.80% |
| MPPT efficiency                                      | 99.90%                                                                                                                                                                                                                                                  |         |        |
| <b>Protection</b>                                    |                                                                                                                                                                                                                                                         |         |        |
| Protection                                           | DC breaker, AC short-circuit protection, Over current protection, Over voltage protection, Isolation protection, RCD, Surge protection, Anti-island protection, Over-temperature protection, Ground fault monitoring, etc.                              |         |        |
| <b>General data</b>                                  |                                                                                                                                                                                                                                                         |         |        |
| Display                                              | LED(standard)/LCD(optional)                                                                                                                                                                                                                             |         |        |
| LCD language                                         | English, Chinese, German, Dutch                                                                                                                                                                                                                         |         |        |
| Communication interface                              | RS485(standard); WiFi, Ethernet(optional)                                                                                                                                                                                                               |         |        |
| Cooling method                                       | Natural cooling                                                                                                                                                                                                                                         |         |        |
| Protection degree                                    | IP65                                                                                                                                                                                                                                                    |         |        |
| Night self-consumption (W)                           | <1                                                                                                                                                                                                                                                      |         |        |
| Topology                                             | Transformerless                                                                                                                                                                                                                                         |         |        |
| Operating temperature range                          | -25°C~+60°C(derate after 45°C)                                                                                                                                                                                                                          |         |        |
| Relative humidity                                    | 4~100%, condensation                                                                                                                                                                                                                                    |         |        |
| Dimension (H x W x D mm)                             | 405x360x150                                                                                                                                                                                                                                             |         |        |
| Weight (kg)                                          | ≤15                                                                                                                                                                                                                                                     |         |        |
| 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, EC 60068-2-2:2007, IEC 60068-2-14:2009, IEC 60068-2-30:2005, IEC 61683:1999 |         |        |
| Safety certificate /EMC certificates                 | IEC 62109-1:2010, IEC 62109-2:2011, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011                                                                                                                                                                        |         |        |
| Warranty (years)                                     | 5(standard)/10(optional)                                                                                                                                                                                                                                |         |        |



# iMars MG

MG3KTL-2M | MG5KTL-2M  
MG4KTL-2M | MG6KTL-2M  
MG4K6TL-2M



WiFi  
GPRS  
5G  
ETHERNET



Handheld  
HMI



Monitoring  
Platform

## Efficient

- Wider voltage range, lower starting voltage and higher conversion efficiency.
- External inductor, reduce internal temperature.

## Smart

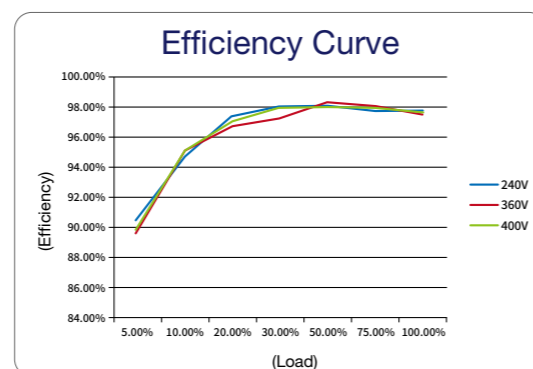
- Grid self-adaptation to meet various grid access requirements.
- Integrated global monitor management, APP with one-button registration, HMI is optional.

## Reliable

- Aluminum casing, natural cooling, IP65 protection level.
- International famous brand components to ensure stable operation.

## Simple

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



|                                                   | MG3KTL-2M                                                                                                                                                                                                                                               | MG4KTL-2M | MG4K6TL-2M | MG5KTL-2M | MG6KTL-2M |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|-----------|-----------|
| <b>Input (DC)</b>                                 |                                                                                                                                                                                                                                                         |           |            |           |           |
| 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)                                    | 120-550                                                                                                                                                                                                                                                 |           |            |           |           |
| Number of MPPT / String per MPPT                  | 2/1                                                                                                                                                                                                                                                     |           |            |           |           |
| Max. DC current (A) per MPPT x Number of MPPT     | 8x2                                                                                                                                                                                                                                                     | 10x2      | 11x2       | 12x2      | 16x2      |
| <b>Output (AC)</b>                                |                                                                                                                                                                                                                                                         |           |            |           |           |
| Rated output power (W)                            | 3000                                                                                                                                                                                                                                                    | 3680      | 4200       | 4600      | 6000      |
| Max. AC output current (A)                        | 14                                                                                                                                                                                                                                                      | 16        | 18.3       | 20        | 26        |
| Power factor                                      | ≥0.99(at rated power)                                                                                                                                                                                                                                   |           |            |           |           |
| THDi                                              | <3%(at rated power)                                                                                                                                                                                                                                     |           |            |           |           |
| Nominal output voltage (V) / Frequency            | 230, L+N+PE, 50Hz/60Hz                                                                                                                                                                                                                                  |           |            |           |           |
| <b>Efficiency</b>                                 |                                                                                                                                                                                                                                                         |           |            |           |           |
| 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%                                                                                                                                                                                                                                                  |           |            |           |           |
| <b>Protection</b>                                 |                                                                                                                                                                                                                                                         |           |            |           |           |
| Protection                                        | DC breaker, AC short-circuit protection, Over current protection, Over voltage protection, Isolation protection, RCD, Surge protection, Anti-island protection, Over-temperature protection, Ground fault monitoring, etc.                              |           |            |           |           |
| <b>General data</b>                               |                                                                                                                                                                                                                                                         |           |            |           |           |
| Display                                           | LED(standard)/LCD(optional)                                                                                                                                                                                                                             |           |            |           |           |
| LCD language                                      | English, Chinese, German, Dutch                                                                                                                                                                                                                         |           |            |           |           |
| Communication interface                           | RS485(standard); WiFi, Ethernet(optional)                                                                                                                                                                                                               |           |            |           |           |
| Cooling method                                    | Natural cooling                                                                                                                                                                                                                                         |           |            |           |           |
| Protection degree                                 | IP65                                                                                                                                                                                                                                                    |           |            |           |           |
| Night self-consumption (W)                        | <1                                                                                                                                                                                                                                                      |           |            |           |           |
| Topology                                          | Transformerless                                                                                                                                                                                                                                         |           |            |           |           |
| Operating temperature range                       | -25°C~+60°C(derate after 45°C)                                                                                                                                                                                                                          |           |            |           |           |
| Relative humidity                                 | 4~100%, condensation                                                                                                                                                                                                                                    |           |            |           |           |
| Dimension (H x W x D mm)                          | 462x360x150                                                                                                                                                                                                                                             |           |            |           |           |
| Weight (kg)                                       | ≤15                                                                                                                                                                                                                                                     |           |            |           |           |
| 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 |           |            |           |           |
| Safety certificate / EMC certificates             | IEC 62109-1:2010, IEC 62109-2:2011, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011                                                                                                                                                                        |           |            |           |           |
| Warranty (years)                                  | 5(standard)/10(optional)                                                                                                                                                                                                                                |           |            |           |           |



# Three Phase Grid-tied Solar Inverter

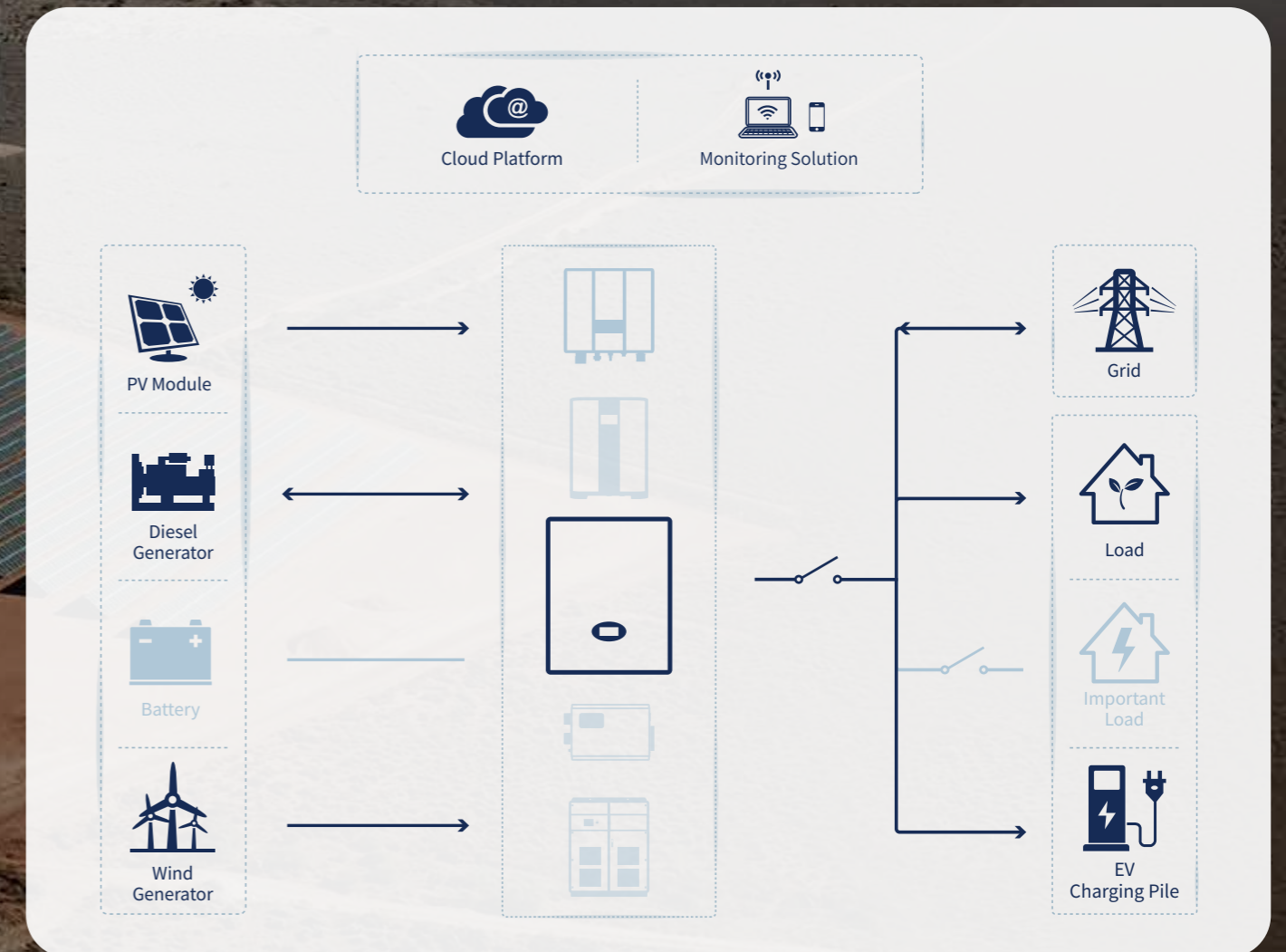


BG4KTR  
BG4KTR-S  
BG5KTR  
BG5KTR-S  
BG6KTR  
BG8KTR  
BG10KTR

BG12KTR  
BG15KTR  
BG17KTR

BG20KTR  
BG25KTR  
BG30KTR  
BG33KTR  
BG35KTR  
BG40KTR-HV  
BG50KTR-HV

BG40KTR  
BG50KTR  
BG60KTR  
BG70KTR





# iMars BG

BG4KTR | BG6KTR  
 BG4KTR-S | BG8KTR  
 BG5KTR | BG10KTR  
 BG5KTR-S



WiFi  
GPRS  
5G  
ETHERNET



Monitoring  
Solution

## Efficient

- Wider voltage range, lower starting voltage and higher conversion efficiency.
- Adopt combined technology of T-type three level topologies and SVPWM.
- External inductor, reduce internal temperature.

## Smart

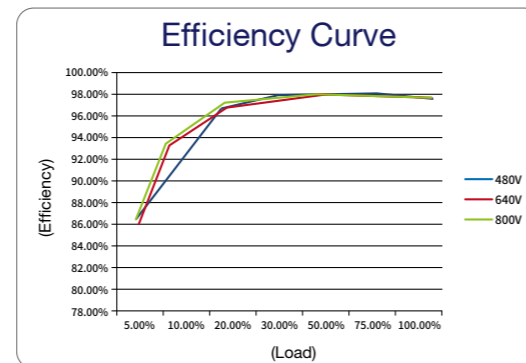
- Grid self-adaptation, no N-line AC design to meet various grid access requirements.
- Integrated global monitor management, APP with one-button registration.

## Reliable

- Aluminum casing, natural cooling, IP65 protection level.
- Adopt internationally famous brand components to ensure stable operation.

## Simple

- Home appliance design, easy to operate.
- Small in size, light in weight, easy to install by a single person.



|                                                   | BG4KTR                                       | BG4KTR-S | BG5KTR | BG5KTR-S    | BG6KTR | BG8KTR | BG10KTR |
|---------------------------------------------------|----------------------------------------------|----------|--------|-------------|--------|--------|---------|
| <b>Input (DC)</b>                                 |                                              |          |        |             |        |        |         |
| Max. DC input power (W)                           | 4800                                         | 4800     | 5700   | 5700        | 7200   | 9000   | 11000   |
| Max. DC input voltage (V)                         | 900                                          |          |        | 1000        |        |        |         |
| Starting voltage (V) / Min. operation voltage (V) | 220/180                                      |          |        | 220/150     |        |        |         |
| MPPT range (V)                                    | 200-800/580                                  |          |        | 200-800/610 |        |        |         |
| Number of MPPT / String per MPPT                  | 2/1                                          | 1/1      | 2/1    | 1/1         | 2/1    |        |         |
| Max. DC current (A) per MPPT x Number of MPPT     | 10x2                                         | 12x1     | 10x2   | 12x1        | 10x2   | 12x2   | 12.5x2  |
| <b>Output (AC)</b>                                |                                              |          |        |             |        |        |         |
| Rated output power (W)                            | 4000                                         | 4000     | 5000   | 5000        | 6000   | 8000   | 10000   |
| Max. AC output current (A)                        | 6.4                                          | 6.4      | 8      | 8           | 9.6    | 12.6   | 14      |
| Power factor                                      | ≥0.99(at rated power)                        |          |        |             |        |        |         |
| THDi                                              | <3%(at rated power)                          |          |        |             |        |        |         |
| Nominal output voltage (V) / Frequency            | 230/400V; 220/380V, 3L+N+PE/3L+PE, 50Hz/60Hz |          |        |             |        |        |         |

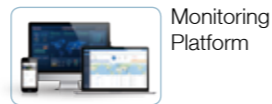
|                   |        |        |        |        |        |        |        |
|-------------------|--------|--------|--------|--------|--------|--------|--------|
| <b>Efficiency</b> |        |        |        |        |        |        |        |
| Max. efficiency   | 98.10% | 98.10% | 98.10% | 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% |        |        |        |        |        |        |

|                   |                                                                                                                                                                                                                            |  |  |  |  |  |  |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|
| <b>Protection</b> |                                                                                                                                                                                                                            |  |  |  |  |  |  |
| Protection        | DC breaker, AC short-circuit protection, Over current protection, Over voltage protection, Isolation protection, RCD, Surge protection, Anti-island protection, Over-temperature protection, Ground fault monitoring, etc. |  |  |  |  |  |  |

|                                       |                                                                                                                                                                                                                |  |  |  |               |  |  |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|---------------|--|--|
| <b>General data</b>                   |                                                                                                                                                                                                                |  |  |  |               |  |  |
| Display                               | 2.0 inches LCD display, support backlit display                                                                                                                                                                |  |  |  |               |  |  |
| LCD language                          | English, Chinese, German, Dutch                                                                                                                                                                                |  |  |  |               |  |  |
| Communication interface               | RS485(standard); WiFi, Ethernet(optional)                                                                                                                                                                      |  |  |  |               |  |  |
| Cooling method                        | Natural cooling                                                                                                                                                                                                |  |  |  | Smart cooling |  |  |
| Protection degree                     | IP65                                                                                                                                                                                                           |  |  |  |               |  |  |
| Night self-consumption (W)            | <1                                                                                                                                                                                                             |  |  |  |               |  |  |
| Topology                              | Transformerless                                                                                                                                                                                                |  |  |  |               |  |  |
| Operating temperature range           | -25°C~+60°C(derate after 45°C)                                                                                                                                                                                 |  |  |  |               |  |  |
| Relative humidity                     | 4~100%, condensation                                                                                                                                                                                           |  |  |  |               |  |  |
| Dimension (H x W x D mm)              | 530x360x150                                                                                                                                                                                                    |  |  |  | 575x360x150   |  |  |
| Weight (kg)                           | 20                                                                                                                                                                                                             |  |  |  | 23            |  |  |
| 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 |  |  |  |               |  |  |
| Safety certificate / EMC certificates | IEC 62109-1:2010, IEC 62109-2:2011, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011                                                                                                                               |  |  |  |               |  |  |
| Warranty (years)                      | 5(standard)/10(optional)                                                                                                                                                                                       |  |  |  |               |  |  |

# iMars BG

BG12KTR | BG17KTR  
BG15KTR



## Efficient

- Wide input voltage range, adapt to all kinds of solar panels and string configuration.
- Dual MPPTs allow unbalanced input power. One MPPT max. input power is up to 60% of total input.
- Adopt combined technology of T-type three level topologies and SVPWM.

## Smart

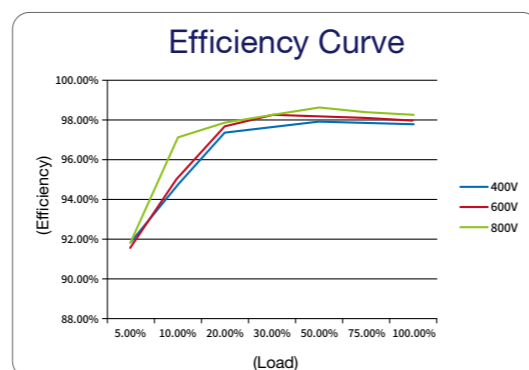
- AC output power is adjustable between 1-100%.
- Grid self-adaptation, no N-line AC design to meet various grid access requirements.
- Integrated global monitor management, APP with one-button registration.

## Reliable

- IP65 protection level, suitable for various installation environments.
- Advanced film bus capacitors, latest thermal simulation technology for longer lifespan.

## Simple

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



|                                                   | BG12KTR                                                                                                                                                                                                                                    | BG15KTR | BG17KTR |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|
| <b>Input (DC)</b>                                 |                                                                                                                                                                                                                                            |         |         |
| 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)                                    | 180-800                                                                                                                                                                                                                                    |         |         |
| Number of MPPT / String per MPPT                  | 2/2                                                                                                                                                                                                                                        |         |         |
| Max. DC current (A) per MPPT x Number of MPPT     | 19x2                                                                                                                                                                                                                                       | 21x2    | 23x2    |
| <b>Output (AC)</b>                                |                                                                                                                                                                                                                                            |         |         |
| Rated output power (W)                            | 12000                                                                                                                                                                                                                                      | 15000   | 17000   |
| Max. AC output current (A)                        | 19.3                                                                                                                                                                                                                                       | 24.1    | 27.3    |
| Power factor                                      | -0.8~+0.8(adjustable)                                                                                                                                                                                                                      |         |         |
| THDi                                              | <3%(at rated power)                                                                                                                                                                                                                        |         |         |
| Nominal output voltage (V) / Frequency            | 230/400V;220/380V, 3L+N+PE/3L+PE, 50Hz/60Hz                                                                                                                                                                                                |         |         |
| <b>Efficiency</b>                                 |                                                                                                                                                                                                                                            |         |         |
| Max. efficiency                                   | 98.20%                                                                                                                                                                                                                                     | 98.30%  | 98.30%  |
| Euro-efficiency                                   | 97.60%                                                                                                                                                                                                                                     | 97.80%  | 97.80%  |
| MPPT efficiency                                   | 99.90%                                                                                                                                                                                                                                     |         |         |
| <b>Protection</b>                                 |                                                                                                                                                                                                                                            |         |         |
| Protection                                        | DC breaker, AC short-circuit protection, Over current protection, Over voltage protection, Isolation protection, RCD, Surge protection, Anti-island protection, Over-temperature protection, Ground fault monitoring, etc.                 |         |         |
| <b>General data</b>                               |                                                                                                                                                                                                                                            |         |         |
| Display                                           | 3.5 inches LCD display, support backlit display                                                                                                                                                                                            |         |         |
| LCD language                                      | English, Chinese, German, Dutch                                                                                                                                                                                                            |         |         |
| Communication interface                           | RS485(standard); WiFi, Etherne(optional)                                                                                                                                                                                                   |         |         |
| Cooling method                                    | Smart cooling                                                                                                                                                                                                                              |         |         |
| Protection degree                                 | IP65                                                                                                                                                                                                                                       |         |         |
| Night self-consumption (W)                        | <0.5                                                                                                                                                                                                                                       |         |         |
| Topology                                          | Transformerless                                                                                                                                                                                                                            |         |         |
| Operating temperature range                       | -25°C~+60°C(derate after 45°C)                                                                                                                                                                                                             |         |         |
| Relative humidity                                 | 4~100%, no condensation                                                                                                                                                                                                                    |         |         |
| Dimension (H x W x D mm)                          | 610x480x204                                                                                                                                                                                                                                |         |         |
| Weight (kg)                                       | 38                                                                                                                                                                                                                                         |         |         |
| 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 |         |         |
| Safety certificate / EMC certificates             | IEC 62109-1:2010, IEC 62109-2:2011, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011                                                                                                                                                           |         |         |
| Warranty (years)                                  | 5(standard)/10(optional)                                                                                                                                                                                                                   |         |         |

# iMars BG

BG20KTR | BG35KTR  
 BG25KTR | BG40KTR-HV  
 BG30KTR | BG50KTR-HV  
 BG33KTR



## Efficient

- Wide input voltage range, adapt to all kinds of solar panels and string configuration.
- Dual MPPTs allow unbalanced input power. One MPPT max. input power is up to 60% of total input.
- Adopt combined technology of T-type three level topologies and SVPWM.

## Smart

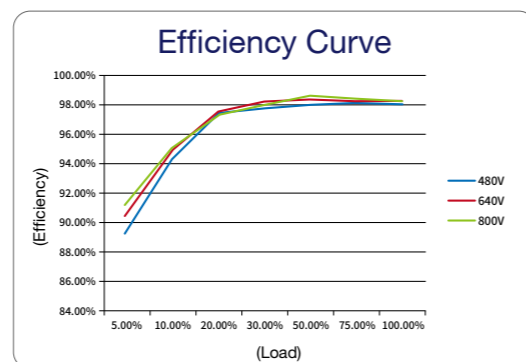
- AC output power is adjustable between 1-100%.
- Grid self-adaptation, no N-line AC design to meet various grid access requirements.
- Integrated global monitor management, APP with one-button registration.

## Reliable

- IP65 protection level, suitable for various installation environments.
- Advanced film bus capacitors, latest thermal simulation technology for longer lifespan.

## Simple

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

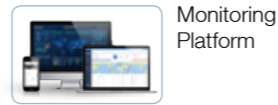


|                                                   | BG20KTR                                                                                                                                                                                                                                                                                     | BG25KTR | BG30KTR | BG33KTR | BG35KTR | BG40KTR-HV                                                                     | BG50KTR-HV                         |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|---------|--------------------------------------------------------------------------------|------------------------------------|
| <b>Input (DC)</b>                                 |                                                                                                                                                                                                                                                                                             |         |         |         |         |                                                                                |                                    |
| 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                                                                                                                                                                                                                                                                                     |         |         |         |         |                                                                                | 200/160                            |
| MPPT range (V)                                    | 280-800                                                                                                                                                                                                                                                                                     |         |         |         |         |                                                                                | 200-900                            |
| 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                               |
| <b>Output (AC)</b>                                |                                                                                                                                                                                                                                                                                             |         |         |         |         |                                                                                |                                    |
| Rated output power (W)                            | 20000                                                                                                                                                                                                                                                                                       | 25000   | 30000   | 33000   | 35000   | 40000                                                                          | 50000                              |
| Max. AC output current (A)                        | 32                                                                                                                                                                                                                                                                                          | 40      | 48      | 48      | 48      | 48                                                                             | 53                                 |
| Power factor                                      | -0.8~+0.8(adjustable)                                                                                                                                                                                                                                                                       |         |         |         |         |                                                                                |                                    |
| THDi                                              | <3%(at rated power)                                                                                                                                                                                                                                                                         |         |         |         |         |                                                                                |                                    |
| Nominal output voltage (V) / Frequency            | 230/400V;220/380V, 3L+N+PE/3L+PE, 50Hz/60Hz                                                                                                                                                                                                                                                 |         |         |         |         | 277/480V, 3L+N+PE/3L+PE, 50Hz/60Hz                                             | 310/540V, 3L+N+PE/3L+PE, 50Hz/60Hz |
| <b>Efficiency</b>                                 |                                                                                                                                                                                                                                                                                             |         |         |         |         |                                                                                |                                    |
| 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%                                                                                                                                                                                                                                                                                      |         |         |         |         |                                                                                |                                    |
| <b>Protection</b>                                 |                                                                                                                                                                                                                                                                                             |         |         |         |         |                                                                                |                                    |
| Protection                                        | DC breaker, AC short-circuit protection, Over current protection, Over voltage protection, Isolation protection, RCD, Surge protection, Anti-island protection, Over-temperature protection, Ground fault monitoring, etc.                                                                  |         |         |         |         |                                                                                |                                    |
| <b>General data</b>                               |                                                                                                                                                                                                                                                                                             |         |         |         |         |                                                                                |                                    |
| Display                                           | 3.5 inches LCD display, support backlight display                                                                                                                                                                                                                                           |         |         |         |         | LED display                                                                    |                                    |
| LCD language                                      | English, Chinese, German, Dutch                                                                                                                                                                                                                                                             |         |         |         |         | /                                                                              |                                    |
| Communication interface                           | RS485(standard); WiFi, Ethernet(optional)                                                                                                                                                                                                                                                   |         |         |         |         | RS485(standard), WiFi, Etherne(optional), PLC carrier communication (optional) |                                    |
| Cooling method                                    | Smart cooling                                                                                                                                                                                                                                                                               |         |         |         |         |                                                                                |                                    |
| Protection degree                                 | IP65                                                                                                                                                                                                                                                                                        |         |         |         |         |                                                                                |                                    |
| Night self-consumption (W)                        | <0.5                                                                                                                                                                                                                                                                                        |         |         |         |         |                                                                                |                                    |
| Topology                                          | Transformerless                                                                                                                                                                                                                                                                             |         |         |         |         |                                                                                |                                    |
| Operating temperature range                       | -25°C~+60°C(derate after 45°C)                                                                                                                                                                                                                                                              |         |         |         |         |                                                                                |                                    |
| Relative humidity                                 | 4~100%, condensation                                                                                                                                                                                                                                                                        |         |         |         |         |                                                                                |                                    |
| Dimension (H x W x D mm)                          | 660x520x250                                                                                                                                                                                                                                                                                 |         |         |         |         | 645x660x425                                                                    |                                    |
| Weight (kg)                                       | 52                                                                                                                                                                                                                                                                                          |         |         |         |         | 57                                                                             |                                    |
| 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 |         |         |         |         |                                                                                |                                    |
| Safety certificate / EMC certificates             | IEC 62109-1:2010, IEC 62109-2:2011, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011                                                                                                                                                                                                            |         |         |         |         |                                                                                |                                    |
| Warranty (years)                                  | 5(standard)/10(optional)                                                                                                                                                                                                                                                                    |         |         |         |         |                                                                                |                                    |



# iMars BG

BG40KTR | BG60KTR  
BG50KTR | BG70KTR



## Efficient

- Wide input voltage range, adapt to all kinds of solar panels and string configuration.
- Adopt combined technology of T-type three level topologies and SVPWM.

## Smart

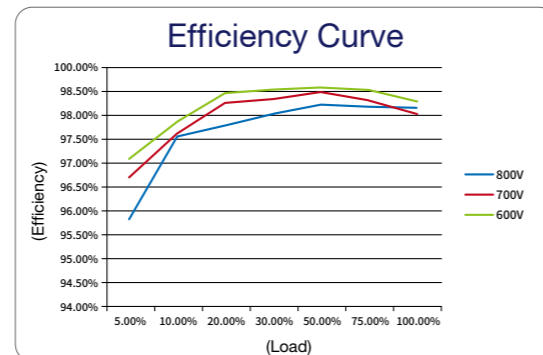
- AC output power is adjustable between 1-100%.
- Grid self-adaptation, no N-line AC design to meet various grid access requirements.
- Integrated global monitor management, APP with one-button registration.

## Reliable

- IP65 protection level, suitable for various installation environments.
- Advanced film bus capacitors, latest thermal simulation technology for longer lifespan.
- Fuse-free design, avoid fuse failure to cause fire.

## Simple

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



|                                                   | BG40KTR                                                                                                                                                                                                                    | BG50KTR | BG60KTR | BG70KTR |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|
| <b>Input (DC)</b>                                 |                                                                                                                                                                                                                            |         |         |         |
| 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)                                    | 570-950                                                                                                                                                                                                                    |         |         |         |
| 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   |
| <b>Output (AC)</b>                                |                                                                                                                                                                                                                            |         |         |         |
| Rated output power (W)                            | 40000                                                                                                                                                                                                                      | 50000   | 60000   | 66000   |
| Max. AC output current (A)                        | 63.5                                                                                                                                                                                                                       | 72.5    | 96      | 96      |
| Power factor                                      | -0.8~+0.8(adjustable)                                                                                                                                                                                                      |         |         |         |
| THDi                                              | <3%(at rated power)                                                                                                                                                                                                        |         |         |         |
| Nominal output voltage (V) / Frequency            | 230/400V, 3L+N+PE/3L+PE, 50Hz/60Hz                                                                                                                                                                                         |         |         |         |
| <b>Efficiency</b>                                 |                                                                                                                                                                                                                            |         |         |         |
| Max. efficiency                                   | 98.90%                                                                                                                                                                                                                     | 98.90%  | 99.00%  | 99.00%  |
| Euro-efficiency                                   | 98.50%                                                                                                                                                                                                                     | 98.50%  | 98.50%  | 98.50%  |
| MPPT efficiency                                   | 99.90%                                                                                                                                                                                                                     |         |         |         |
| <b>Protection</b>                                 |                                                                                                                                                                                                                            |         |         |         |
| Protection                                        | DC breaker, AC short-circuit protection, Over current protection, Over voltage protection, Isolation protection, RCD, Surge protection, Anti-island protection, Over-temperature protection, Ground fault monitoring, etc. |         |         |         |
| <b>General data</b>                               |                                                                                                                                                                                                                            |         |         |         |
| Display                                           | 3.5 inches LCD display, support backlit display                                                                                                                                                                            |         |         |         |
| LCD language                                      | English, Chinese, German, Dutch                                                                                                                                                                                            |         |         |         |
| Communication interface                           | RS485(standard); WiFi, Ethernet(optional), PLC carrier communication(optional)                                                                                                                                             |         |         |         |
| Cooling method                                    | Smart cooling                                                                                                                                                                                                              |         |         |         |
| Protection degree                                 | IP65                                                                                                                                                                                                                       |         |         |         |
| Night self-consumption (W)                        | <0.5                                                                                                                                                                                                                       |         |         |         |
| Topology                                          | Transformerless                                                                                                                                                                                                            |         |         |         |
| Operating temperature range                       | -25°C~+60°C(derate after 45°C)                                                                                                                                                                                             |         |         |         |
| Relative humidity                                 | 4~100%, condensation                                                                                                                                                                                                       |         |         |         |
| Dimension (H x W x D mm)                          | 810x645x235                                                                                                                                                                                                                |         |         |         |
| Weight (kg)                                       | 53                                                                                                                                                                                                                         |         |         |         |
| Grid qualification                                | NB/T 32004-2013, TUV, CE, VDE0126-1-1, VDE-AR-N4105, G59/3,C10/11, TF3.2.1, AS/NZS 4777.2:2015, EN61000-6-1:4, EN61000-11:12, IEC62109-1:2010, PEA, ZVRT                                                                   |         |         |         |
| Safety certificate / EMC certificates             | VDE-AR-N4105, AS4777/3100, CQC                                                                                                                                                                                             |         |         |         |
| Warranty (years)                                  | 5(standard)/10(optional)                                                                                                                                                                                                   |         |         |         |



# Energy Storage Solar Inverter



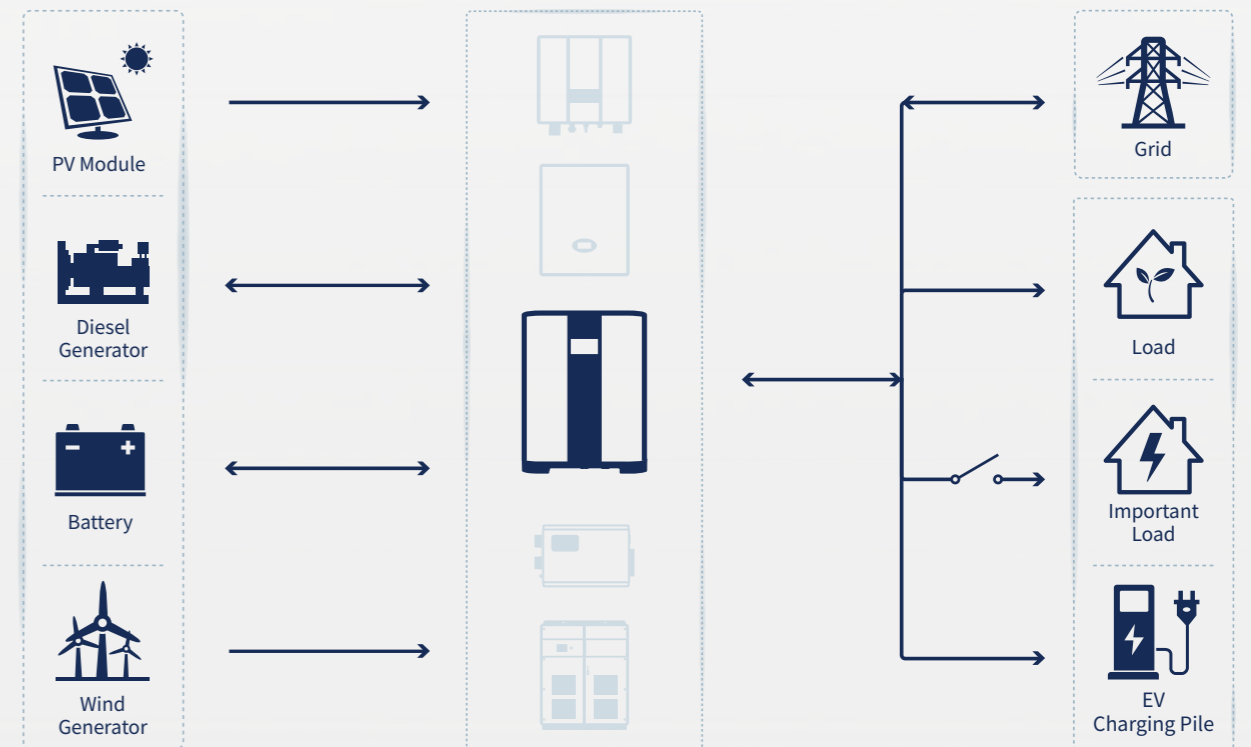
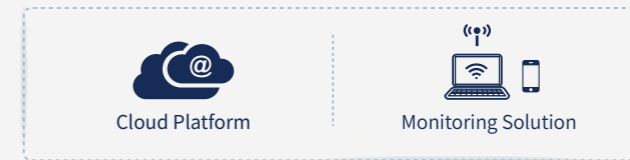
BD3KTL  
BD5KTL

BD3KTL-MR  
BD4KTL-MR  
BD5KTL-MR

BD3KTL-HS  
BD5KTL-HS

BD3KTL-TD  
BD5KTL-TD

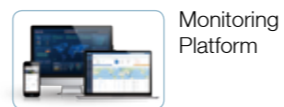
BD3KTL-PS





# iMars BD Hybrid Inverter

BD3KTL | BD5KTL



## Efficient

- Support on-grid charge/discharge and off-grid mode.
- 10ms seamless switching.

## Smart

- Friendly HMI, large LCD display.
- Optional diesel engine communication interface.
- Integrated global monitor management, APP with one-button registration.
- Intelligent charging and discharging to extend battery life.

## Reliable

- Integrated professional BMS.
- Compatible with lead-acid and lithium battery.

## Simple

- Small size, light weight, convenient for installation.

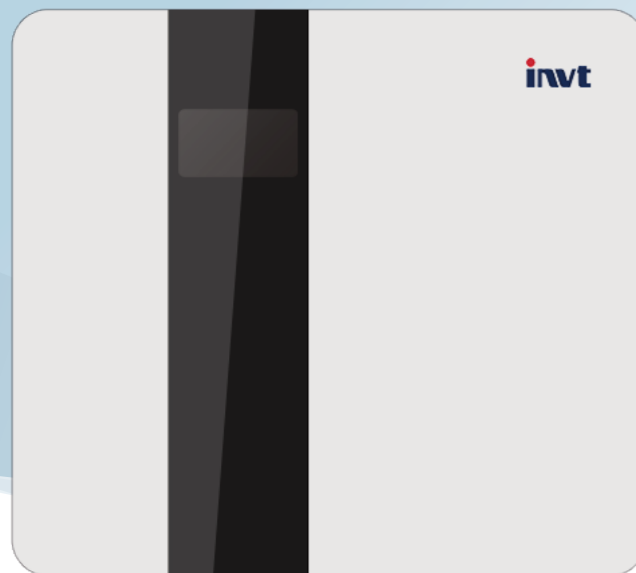
|                                                      | BD3KTL                                                                                                                                                                                                                     | BD5KTL |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| <b>DC input (PV)</b>                                 |                                                                                                                                                                                                                            |        |
| Max. DC input power (W)                              | 3300                                                                                                                                                                                                                       | 6600   |
| Max. DC input voltage (V)                            | 550                                                                                                                                                                                                                        |        |
| Starting voltage (V) /<br>Min. operation voltage (V) | 100/80                                                                                                                                                                                                                     |        |
| MPPT range (V)                                       | 120~450                                                                                                                                                                                                                    |        |
| Max. input current (A)                               | 13                                                                                                                                                                                                                         | 13x2   |
| Number of MPPT / String per MPPT                     | 1/1                                                                                                                                                                                                                        | 2/1    |
| Short circuit current (A)                            | 15.6                                                                                                                                                                                                                       | 15.6x2 |
| <b>AC output 1 (Grid)</b>                            |                                                                                                                                                                                                                            |        |
| Rated power (W)                                      | 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)                             | 13.6                                                                                                                                                                                                                       | 24.5   |
| Power factor                                         | ≥0.99(±0.95adjustable)                                                                                                                                                                                                     |        |
| THDi                                                 | ≤3%(at rated power)                                                                                                                                                                                                        |        |
| Max. efficiency                                      | 97.20%                                                                                                                                                                                                                     | 97.70% |
| Euro-efficiency                                      | 96.50%                                                                                                                                                                                                                     | 97%    |
| <b>AC output 2 (Load)</b>                            |                                                                                                                                                                                                                            |        |
| Rated output power (VA)                              | 3000                                                                                                                                                                                                                       | 4600   |
| Rated output voltage (V)                             | 208/220/230/240(±2%)                                                                                                                                                                                                       |        |
| Rated output frequency (Hz)                          | 50/60(±0.2%)                                                                                                                                                                                                               |        |
| Off-network switching time (ms)                      | ≤10                                                                                                                                                                                                                        |        |
| Voltage harmonic distortion                          | ≤3%(at rated power)                                                                                                                                                                                                        |        |
| Peak power/duration                                  | 150%/10s                                                                                                                                                                                                                   |        |
| <b>Battery</b>                                       |                                                                                                                                                                                                                            |        |
| Rated voltage (V)                                    | 48                                                                                                                                                                                                                         |        |
| Voltage range (settable) (V)                         | 42-58                                                                                                                                                                                                                      |        |
| Battery type                                         | Lithium battery or Lead-acid battery                                                                                                                                                                                       |        |
| Battery capacity                                     | /                                                                                                                                                                                                                          |        |
| Max.charging current (settable) (A)                  | 60                                                                                                                                                                                                                         | 100    |
| Max. discharging current (settable) (A)              | 60                                                                                                                                                                                                                         | 100    |
| Max. efficiency                                      | 94%                                                                                                                                                                                                                        |        |
| <b>Protection</b>                                    |                                                                                                                                                                                                                            |        |
| Protection                                           | DC breaker, AC short-circuit protection, Over current protection, Over voltage protection, Isolation protection, RCD, Surge protection, Anti-island protection, Over-temperature protection, Ground fault monitoring, etc. |        |
| <b>Others</b>                                        |                                                                                                                                                                                                                            |        |
| Isolation method (photovoltaic side)                 | Non-isolation                                                                                                                                                                                                              |        |
| Isolation method (battery side)                      | High-frequency isolation                                                                                                                                                                                                   |        |
| Operating temperature range                          | -10°C~+40°C                                                                                                                                                                                                                |        |
| Cooling method                                       | Air cooling                                                                                                                                                                                                                |        |
| Degree of protection / Altitude (m)                  | IP20/<1000m                                                                                                                                                                                                                |        |
| Relative humidity                                    | 0~95%, no condensation                                                                                                                                                                                                     |        |
| Noise (dB)                                           | ≤50                                                                                                                                                                                                                        |        |
| Display                                              | LCD                                                                                                                                                                                                                        |        |
| Communication interface                              | RS485(standard); WiFi, Ethernet(optional), CAN-BUS (internal communication) , USB, Genset                                                                                                                                  |        |
| Dimension (H x W x D mm)                             | 610x425x190                                                                                                                                                                                                                |        |
| Weight (kg)                                          | 19                                                                                                                                                                                                                         |        |
| Installation                                         | Wall mounting                                                                                                                                                                                                              |        |
| Ground fault alarm                                   | Built-in buzzer                                                                                                                                                                                                            |        |
| Grid qualification                                   | VDE-AR-N4105, AS/NZS 4777.2:2015, NB/T 32004-2013                                                                                                                                                                          |        |
| Safety certificate / EMC certificates                | IEC 62109-1:2010, IEC 62109-2:2011, EN 61000-6-2:2005                                                                                                                                                                      |        |
| Warranty (years)                                     | 3/5                                                                                                                                                                                                                        |        |



# iMars BD

## Hybrid Inverter

BD3KTL-MR | BD5KTL-MR  
BD4KTL-MR



WiFi  
GPRS  
5G  
ETHERNET



Monitoring  
Platform

### Efficient

- Support on-grid charge/discharge and off-grid mode.
- 10ms seamless switching.

### Smart

- Friendly HMI, large LCD display.
- Optional diesel engine communication interface.
- Global Integrated monitor management, APP with one-button registration.
- Intelligent charging and discharging to extend battery life.

### Reliable

- Integrated professional BMS.
- Compatible with lead-acid and lithium battery.
- IP65 protection, natural cooling.

### Simple

- Small size, light weight, convenient for installation.

|                                       | BD3KTL-MR                                                         | BD4KTL-MR | BD5KTL-MR |
|---------------------------------------|-------------------------------------------------------------------|-----------|-----------|
| <b>DC input (PV)</b>                  |                                                                   |           |           |
| Max. DC input power (W)               | 4600                                                              | 5600      | 6000      |
| Max. DC input voltage (V)             | 550                                                               |           |           |
| Starting voltage (V)                  | 125                                                               |           |           |
| MPPT range (V)                        | 125-550                                                           |           |           |
| Max. input current (A)                | 14x2                                                              |           |           |
| Number of MPPT / String per MPPT      | 2/1                                                               |           |           |
| <b>AC output 1 (Grid)</b>             |                                                                   |           |           |
| Rated power (W)                       | 3680                                                              | 4600      | 5000      |
| Rated grid frequency (Hz)             | 50/60                                                             |           |           |
| Grid voltage range (V)                | 180~280                                                           |           |           |
| Max. output current (A)               | 17                                                                | 21        | 23        |
|                                       | 1(-0.8~+0.8)                                                      |           |           |
| THDi                                  | <3%                                                               |           |           |
| Max. efficiency                       | 97.6%                                                             |           |           |
| Euro-efficiency                       | 97.0%                                                             |           |           |
| <b>AC output 2 (Load)</b>             |                                                                   |           |           |
| Rated output power (VA)               | 3600                                                              | 4600      | 5000      |
| Rated output voltage (V)              | 230                                                               |           |           |
| Rated current (A)                     | 17                                                                | 21        | 23        |
| Rated output frequency (Hz)           | 50                                                                |           |           |
| Off-network switching time (ms)       | <20                                                               |           |           |
| THDU                                  | <2%                                                               |           |           |
| Parallel operation                    | yes                                                               |           |           |
| <b>Battery</b>                        |                                                                   |           |           |
| Battery voltage range (V)             | 42~59                                                             |           |           |
| Max. charging voltage (V)             | 58                                                                |           |           |
| Battery type                          | Lithium battery or Lead-acid battery                              |           |           |
| Capacity of battery (kWh)             | 3~12                                                              |           |           |
| Depth of discharge                    | 80%DOD/50%DOD                                                     |           |           |
| Communication interface               | CAN/RS485                                                         |           |           |
| Max. charging current (A)             | 110                                                               |           |           |
| Max. discharging current (A)          | 110                                                               |           |           |
| Max. efficiency                       | 95.0%                                                             |           |           |
| <b>Others</b>                         |                                                                   |           |           |
| Inverter topology                     | Transformerless                                                   |           |           |
| Self-consumption (W)                  | <3                                                                |           |           |
| Operating temperature range           | -25°C~+60°C                                                       |           |           |
| Cooling method                        | Natural                                                           |           |           |
| Degree of protection / Altitude (m)   | IP65/<2000m                                                       |           |           |
| Relative humidity                     | 4~100%, condensation                                              |           |           |
| Noise (dB)                            | <35                                                               |           |           |
| Display                               | LCD                                                               |           |           |
| Communication interface               | RS485(standard); WiFi、LAN(optional), CAN(standard), DRM(standard) |           |           |
| Dimension (H x W x D mm)              | 550x200x515                                                       |           |           |
| Weight (kg)                           | 24.5                                                              |           |           |
| Safety certificate / EMC certificates | CQC, TUV, SAA, G83                                                |           |           |

# iMars BD

## All-in-one Hybrid System

BD3KTL- HS | BD5KTL- HS



WiFi  
GPRS  
5G  
ETHERNET



Monitoring  
Platform

### Efficient

- Battery and grid priority.
- 10ms seamless switching.
- Built-in lithium battery, and the capacity of 2.4-12kwh is optional.

### Smart

- On-grid and off-grid automatically detect, maximize peak-shaving and valley-filling or self-use performance.
- RS485\*3, CAN\*2(with lithium battery), WiFi (optional).
- Charging and discharging time is settable.
- Grid-tied output power is adjustable (0~100%).

### Reliable

- Professional BMS, intelligent charging function.
- Compatible with lead-acid and lithium battery.
- Charging current is settable according to different battery types.

### Simple

- Friendly interface, 4.3 inch LCD display.
- Inverter and battery in one case, easy to operate.

|                                                   | BD3KTL-HS                                                                                                                                                                                                                  | BD5KTL-HS |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>DC input (PV)</b>                              |                                                                                                                                                                                                                            |           |
| Max. DC input power (W)                           | 3300                                                                                                                                                                                                                       | 6600      |
| Max. DC input voltage (V)                         | 550                                                                                                                                                                                                                        |           |
| Starting voltage (V) / Min. operation voltage (V) | 100/80                                                                                                                                                                                                                     |           |
| MPPT range (V)                                    | 120~450                                                                                                                                                                                                                    |           |
| Max. input current (A)                            | 13A                                                                                                                                                                                                                        | 13A×2     |
| Number of MPPT / String per MPPT                  | 1/1                                                                                                                                                                                                                        | 2/1       |
| Short circuit current (A)                         | 15.6                                                                                                                                                                                                                       | 15.6×2    |
| <b>AC output 1 (Grid)</b>                         |                                                                                                                                                                                                                            |           |
| Rated power (W)                                   | 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        |
| Power factor                                      | ≥0.99(±0.95adjustable)                                                                                                                                                                                                     |           |
| THDi                                              | ≤3%(at rated power)                                                                                                                                                                                                        |           |
| Max. efficiency                                   | 97.20%                                                                                                                                                                                                                     | 97.70%    |
| Euro-efficiency                                   | 96.50%                                                                                                                                                                                                                     | 97%       |
| <b>AC output 2 (Load)</b>                         |                                                                                                                                                                                                                            |           |
| Rated output power (VA)                           | 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%(at rated power)                                                                                                                                                                                                        |           |
| Peak power/duration                               | 150%/10s                                                                                                                                                                                                                   |           |
| <b>Battery</b>                                    |                                                                                                                                                                                                                            |           |
| 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       |
| Max. discharging current (settable) (A)           | 60                                                                                                                                                                                                                         | 100       |
| Max. efficiency                                   | 94%                                                                                                                                                                                                                        |           |
| <b>Protection</b>                                 |                                                                                                                                                                                                                            |           |
| Protection                                        | DC breaker, AC short-circuit protection, Over current protection, Over voltage protection, Isolation protection, RCD, Surge protection, Anti-island protection, Over-temperature protection, Ground fault monitoring, etc. |           |
| <b>Others</b>                                     |                                                                                                                                                                                                                            |           |
| Isolation method (photovoltaic side)              | Non-isolation                                                                                                                                                                                                              |           |
| Isolation method (battery side)                   | High-frequency isolation                                                                                                                                                                                                   |           |
| Operating temperature range                       | -25°C~+60°C(derate after40°C)                                                                                                                                                                                              |           |
| Cooling method                                    | Air cooling                                                                                                                                                                                                                |           |
| Degree of protection / Altitude (m)               | IP20/<1000m                                                                                                                                                                                                                |           |
| Relative humidity                                 | 0~95%, no condensation                                                                                                                                                                                                     |           |
| Noise (dB)                                        | ≤ 50                                                                                                                                                                                                                       |           |
| Display                                           | LCD                                                                                                                                                                                                                        |           |
| Communication interface                           | RS485(standard); WiFi、Ethernet(optional)、CAN-BUS(internal communication)、USB、Genset                                                                                                                                        |           |
| Dimension (H x W x D mm)                          | 1043.5x654x605                                                                                                                                                                                                             |           |
| Weight (kg)                                       | 98.5                                                                                                                                                                                                                       |           |
| Installation                                      | Standing                                                                                                                                                                                                                   |           |
| Ground fault alarm                                | Built-in buzzer                                                                                                                                                                                                            |           |
| Grid qualification                                | VDE-AR-N4105, AS/NZS 4777.2:2015, NB/T 32004-2013                                                                                                                                                                          |           |
| Safety certificate / EMC certificates             | IEC 62109-1:2010, IEC 62109-2:2011, EN 61000-6-2:2005                                                                                                                                                                      |           |
| Warranty (years)                                  | 3/5                                                                                                                                                                                                                        |           |





# iMars BD

## All-in-one Hybrid System

BD3KTL- TD | BD5KTL- TD



WiFi  
GPRS  
5G  
ETHERNET



Monitoring  
Platform

### Efficient

- Priority of battery and grid is settable.
- 10ms seamless switching.
- Built-in lithium battery, and the capacity of 2.4-14.4kwh is optional.

### Smart

- On-grid and off-grid automatically detect, maximize peak-shaving and valley-filling or self-use performance.
- RS485\*3, CAN\*2(with lithium battery), WiFi (optional).
- Charging and discharging time is settable.
- Grid-tied output power is adjustable (0~100%).

### Reliable

- Professional BMS, intelligent charging function.
- Compatible with lead-acid and lithium battery.
- Charging current is settable according to different battery types.
- IP54 protection level.

### Simple

- Friendly interface, 4.3 inch LCD display.
- Inverter and battery in one case, easy to operate.

|                                                   | BD3KTL-TD                                                                                                                                                                                                                  | BD5KTL-TD |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>DC input (PV)</b>                              |                                                                                                                                                                                                                            |           |
| Max. DC input power (W)                           | 3300                                                                                                                                                                                                                       | 6600      |
| Max. DC input voltage (V)                         | 550                                                                                                                                                                                                                        |           |
| Starting voltage (V) / Min. operation voltage (V) | 100/80                                                                                                                                                                                                                     |           |
| MPPT range (V)                                    | 120~450                                                                                                                                                                                                                    |           |
| Max. input current (A)                            | 13                                                                                                                                                                                                                         | 13×2      |
| Number of MPPT / String per MPPT                  | 1/1                                                                                                                                                                                                                        | 2/1       |
| Short circuit current (A)                         | 15.6                                                                                                                                                                                                                       | 15.6×2    |
| <b>AC output 1 (Grid)</b>                         |                                                                                                                                                                                                                            |           |
| Rated power (W)                                   | 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)                          | 13.6                                                                                                                                                                                                                       | 24.5      |
| Power factor                                      | ≥0.99(±0.95adjustable)                                                                                                                                                                                                     |           |
| THDi                                              | ≤3%(at rated power)                                                                                                                                                                                                        |           |
| Max. efficiency                                   | 97.20%                                                                                                                                                                                                                     | 97.70%    |
| Euro-efficiency                                   | 96.50%                                                                                                                                                                                                                     | 97%       |
| <b>AC output 2 (Load)</b>                         |                                                                                                                                                                                                                            |           |
| Rated output power (VA)                           | 3000                                                                                                                                                                                                                       | 4600      |
| Rated output voltage (V)                          | 208/220/230/240(±2%)                                                                                                                                                                                                       |           |
| Rated output frequency (Hz)                       | 50/60(±0.2%)                                                                                                                                                                                                               |           |
| Off-network switching time                        | ≤10ms                                                                                                                                                                                                                      |           |
| Voltage harmonic distortion                       | ≤3%(at rated power)                                                                                                                                                                                                        |           |
| Peak power/duration                               | 150%/10s                                                                                                                                                                                                                   |           |
| <b>Battery</b>                                    |                                                                                                                                                                                                                            |           |
| Rated voltage (V)                                 | 48                                                                                                                                                                                                                         |           |
| Voltage range (settable) (V)                      | 42-58                                                                                                                                                                                                                      |           |
| Battery type                                      | Lithium battery or Lead-acid battery                                                                                                                                                                                       |           |
| Battery capacity                                  | 2.4kWh-12kWh(adjustable)                                                                                                                                                                                                   |           |
| Max.charging current (settable) (A)               | 60                                                                                                                                                                                                                         | 100       |
| Max. discharging current (settable) (A)           | 60                                                                                                                                                                                                                         | 100       |
| Max. efficiency                                   | 94%                                                                                                                                                                                                                        |           |
| <b>Protection</b>                                 |                                                                                                                                                                                                                            |           |
| Protection                                        | DC breaker, AC short-circuit protection, Over current protection, Over voltage protection, Isolation protection, RCD, Surge protection, Anti-island protection, Over-temperature protection, Ground fault monitoring, etc. |           |
| <b>Others</b>                                     |                                                                                                                                                                                                                            |           |
| Isolation method (photovoltaic side)              | Non-isolation                                                                                                                                                                                                              |           |
| Isolation method (battery side)                   | High-frequency isolation                                                                                                                                                                                                   |           |
| Operating temperature range                       | -10°C~+40°C                                                                                                                                                                                                                |           |
| Cooling method                                    | Air cooling                                                                                                                                                                                                                |           |
| Degree of protection / Altitude (m)               | IP54/<1000m                                                                                                                                                                                                                |           |
| Relative humidity                                 | 4~100%, condensation                                                                                                                                                                                                       |           |
| Noise (dB)                                        | ≤60                                                                                                                                                                                                                        |           |
| Display                                           | LCD                                                                                                                                                                                                                        |           |
| Communication interface                           | RS485(standard); WiFi(optional), Ethernet(optional), CAN-BUS(internal communication), USB, Genset                                                                                                                          |           |
| Dimension (H x W x D mm)                          | 1300x650x440                                                                                                                                                                                                               |           |
| Weight (kg)                                       | 99                                                                                                                                                                                                                         |           |
| Installation                                      | Standing                                                                                                                                                                                                                   |           |
| Ground fault alarm                                | Built-in buzzer                                                                                                                                                                                                            |           |
| Grid qualification                                | VDE-AR-N4105, AS/NZS 4777.2:2015, NB/T 32004-2013                                                                                                                                                                          |           |
| Safety certificate / EMC certificates             | IEC 62109-1:2010, IEC 62109-2:2011, EN 61000-6-2:2005                                                                                                                                                                      |           |
| Warranty (years)                                  | 3/5                                                                                                                                                                                                                        |           |

# iMars BD

## AC-coupled Solar Storage Inverter

### BD3KTL-PS



WiFi  
GPRS



Monitoring  
Platform

### Efficient

- Professional BMS, three charging stage, lead-acid battery and lithium iron are compatible.
- Voltage and current charging setup are available.
- Charge and discharge time can be adjustable, Maximizing the peak cutting and valley filling performance.

### Smart

- RS485\*2, CAN\*1(lithium battery), WiFi (optional).
- Multiple monitoring modes: APP, laptop, website.
- 50Hz/60Hz auto adaptation.

### Reliable

- IP65 protection.
- Use international top brand components, with perfect protection function.

### Simple

- Small in size, light in weight, easy to install.
- Friendly HMI, 4.3-inch LCD display.

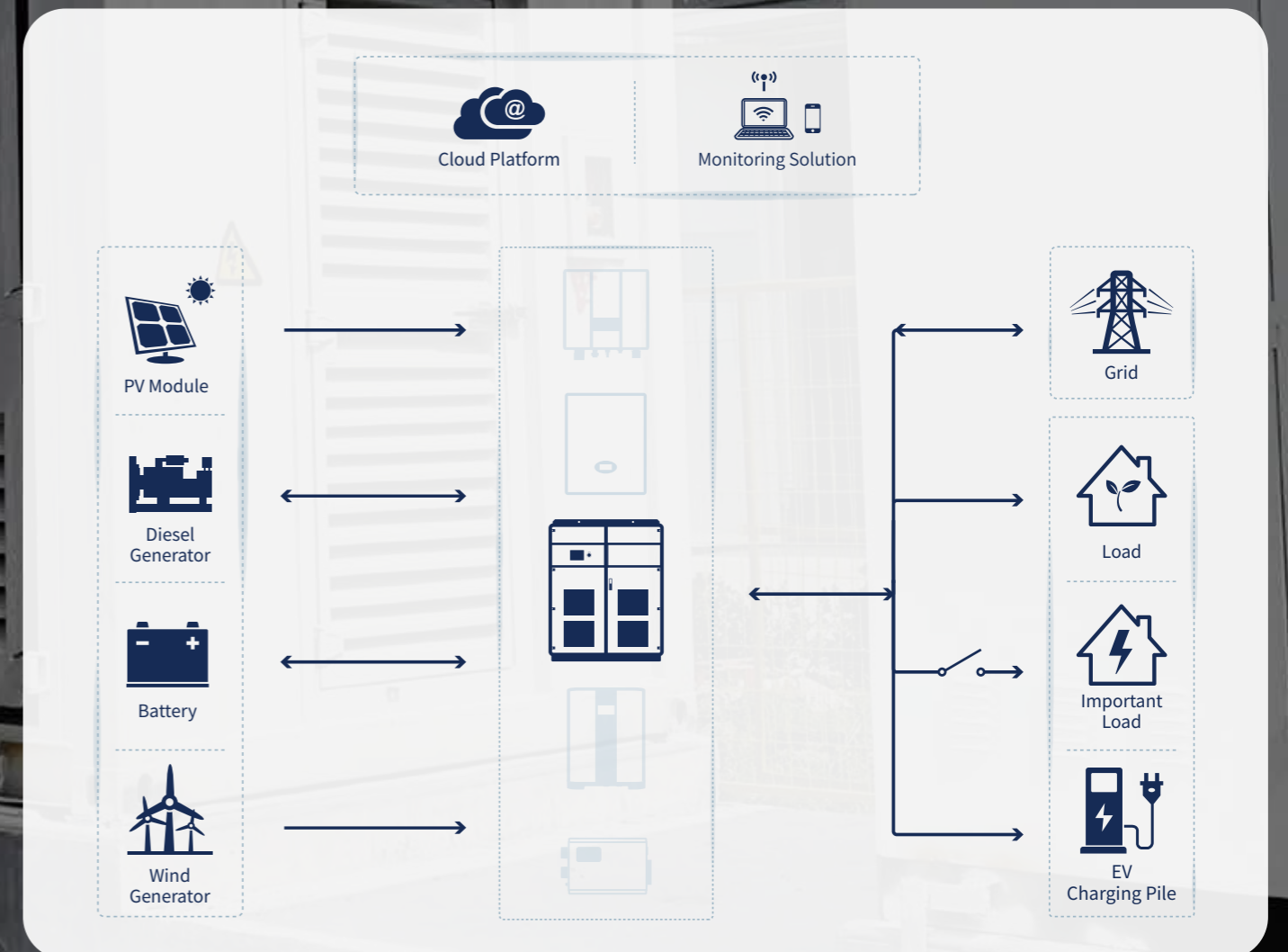
|                                         | BD3KTL-PS                                                                                                                                                                                                                  |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>AC grid parameters</b>               |                                                                                                                                                                                                                            |
| Rated output power (W)                  | 3000                                                                                                                                                                                                                       |
| Max. output current (A)                 | 13                                                                                                                                                                                                                         |
| Rated output voltage (V) / frequency    | 230, L+N+PE, 50Hz/60Hz                                                                                                                                                                                                     |
| Power factor                            | ≥0.99(±0.95 adjustable)                                                                                                                                                                                                    |
| THDi                                    | ≤3%(at rated power)                                                                                                                                                                                                        |
| Max. output fault current (A)           | 50                                                                                                                                                                                                                         |
| <b>Battery</b>                          |                                                                                                                                                                                                                            |
| Battery type                            | Lithium battery or Lead-acid battery                                                                                                                                                                                       |
| Rated voltage (V)                       | 48                                                                                                                                                                                                                         |
| Max.charging current (settable) (A)     | 60                                                                                                                                                                                                                         |
| Max. discharging current (settable) (A) | 65                                                                                                                                                                                                                         |
| Charging curves                         | Three stage                                                                                                                                                                                                                |
| Max. efficiency                         | 93%                                                                                                                                                                                                                        |
| <b>Protection</b>                       |                                                                                                                                                                                                                            |
| Protection                              | DC breaker, AC short-circuit protection, Over current protection, Over voltage protection, Isolation protection, RCD, Surge protection, Anti-island protection, Over-temperature protection, Ground fault monitoring, etc. |
| <b>Others</b>                           |                                                                                                                                                                                                                            |
| Isolation method (battery side)         | High-frequency isolation                                                                                                                                                                                                   |
| Degree of protection                    | IP65                                                                                                                                                                                                                       |
| Dimension (H x W x D mm)                | 360x150x507                                                                                                                                                                                                                |
| Operating temperature range             | -25°C~+60°C                                                                                                                                                                                                                |
| Cooling method                          | Air cooling                                                                                                                                                                                                                |
| Relative humidity                       | 4~100%, condensation                                                                                                                                                                                                       |
| Display                                 | LCD                                                                                                                                                                                                                        |
| Communication interface                 | RS485(standard); WiFi(optional)、CAN-BUS                                                                                                                                                                                    |
| Grid qualification                      | VDE-AR-N4105, AS4777/3100                                                                                                                                                                                                  |
| Warranty (years)                        | 3/5                                                                                                                                                                                                                        |



# Energy Storage Converter



BD50KTR-T  
 BD100KTR-T  
 BD250KTR-T  
 BD500KTR-T  
 BD500KTR  
 BD630KTR



# iMars BD

BD50KTR-T | BD500KTR  
 BD100KTR-T | BD500KTR-T  
 BD250KTR-T | BD630KTR



EMS

## Efficient

- Advanced DSP, more stable and effective.
- Compatible with different batteries.
- Wide battery voltage range.

## Smart

- Support on-grid charge/discharge, off-grid modes.
- Reactive and active power can be adjusted.
- Flexible communication mode, BMS management.

## Reliable

- Support soft start, support parallel connection function.
- Friendly HMI, easy to use and maintenance.
- Small size, convenient for installation, transportation and maintenance.

|                             | BD50KTR-T                            | BD100KTR-T | BD250KTR-T    | BD500KTR-T    | BD500KTR      | BD630KTR |
|-----------------------------|--------------------------------------|------------|---------------|---------------|---------------|----------|
| <b>DC (Battery)</b>         |                                      |            |               |               |               |          |
| Apparent power (kW)         | 55                                   | 110        | 275           | 500           |               | 690      |
| Current regulation          | ±1%                                  |            |               |               |               |          |
| Voltage regulation          | ±1%                                  |            |               |               |               |          |
| Voltage ripple              | <3%                                  |            |               |               |               |          |
| Current ripple              | <2%                                  |            |               |               |               |          |
| Voltage range (V)           | 500-850                              |            |               | 550-850       |               |          |
| Max current (A)             | 110                                  | 220        | 550           | 1100          |               | 1200     |
| <b>AC (Grid-connected)</b>  |                                      |            |               |               |               |          |
| Rated power (kW)            | 50                                   | 100        | 250           | 500           |               | 630      |
| Rated voltage (V)           | 400                                  |            |               | 315           |               |          |
| Voltage range (V)           | 310-450                              |            |               | 252-362       |               |          |
| Rated current (A)           | 72                                   | 144        | 361           | 722           | 916           | 1155     |
| Rated frequency (Hz)        | 50/60                                |            |               |               |               |          |
| Frequency range (Hz)        | 45-55/55-65                          |            |               |               |               |          |
| THDi                        | <3%                                  |            |               |               |               |          |
| Power factor                | 1(-0.8~+0.8)                         |            |               |               |               |          |
| AC connection               | 3W+N+PE                              |            |               | 3W+PE         |               |          |
| <b>AC (Off-grid)</b>        |                                      |            |               |               |               |          |
| Rated voltage (V)           | 400                                  |            |               |               |               |          |
| THDU                        | ≤3% linear                           |            |               |               |               |          |
| Rated frequency (Hz)        | 50/60                                |            |               |               |               |          |
| Overload capability         | 110%-10min/120%-1min                 |            |               |               |               |          |
| <b>General Information</b>  |                                      |            |               |               |               |          |
| Maximum efficiency          | 0.965                                | 0.971      | 0.973         | 0.975         |               | 0.987    |
| Protection degree           | IP21                                 |            |               |               |               |          |
| Noise (dB)                  | <65                                  |            |               |               |               |          |
| Operating temperature range | -30°C~+55°C                          |            |               |               |               |          |
| Cooling method              | Forced air                           |            |               |               |               |          |
| Relative humidity           | 0-95% non-condensation               |            |               |               |               |          |
| Maximum altitude            | 5000m(derated above 3000m)           |            |               |               |               |          |
| Dimension (W x D x H mm)    | 800x800x2050                         |            | 1200x800x2050 | 1600x935x2050 | 1200x800x2050 |          |
| Weight (kg)                 | 450                                  | 860        | 1350          | 2770          | 1400          |          |
| Transformer                 | yes                                  |            |               |               | no            |          |
| Self-Consumption (W)        | <40                                  |            |               |               |               |          |
| On / Off grid transfer      | Manual(standard)/Automatic(optional) |            |               |               |               |          |
| <b>Communication</b>        |                                      |            |               |               |               |          |
| Display                     | Touch screen                         |            |               |               |               |          |
| BMS Interface               | RS485; CAN                           |            |               |               |               |          |
| Certificates                | CQC, TUV                             |            |               |               |               |          |





# Off-grid Inverter

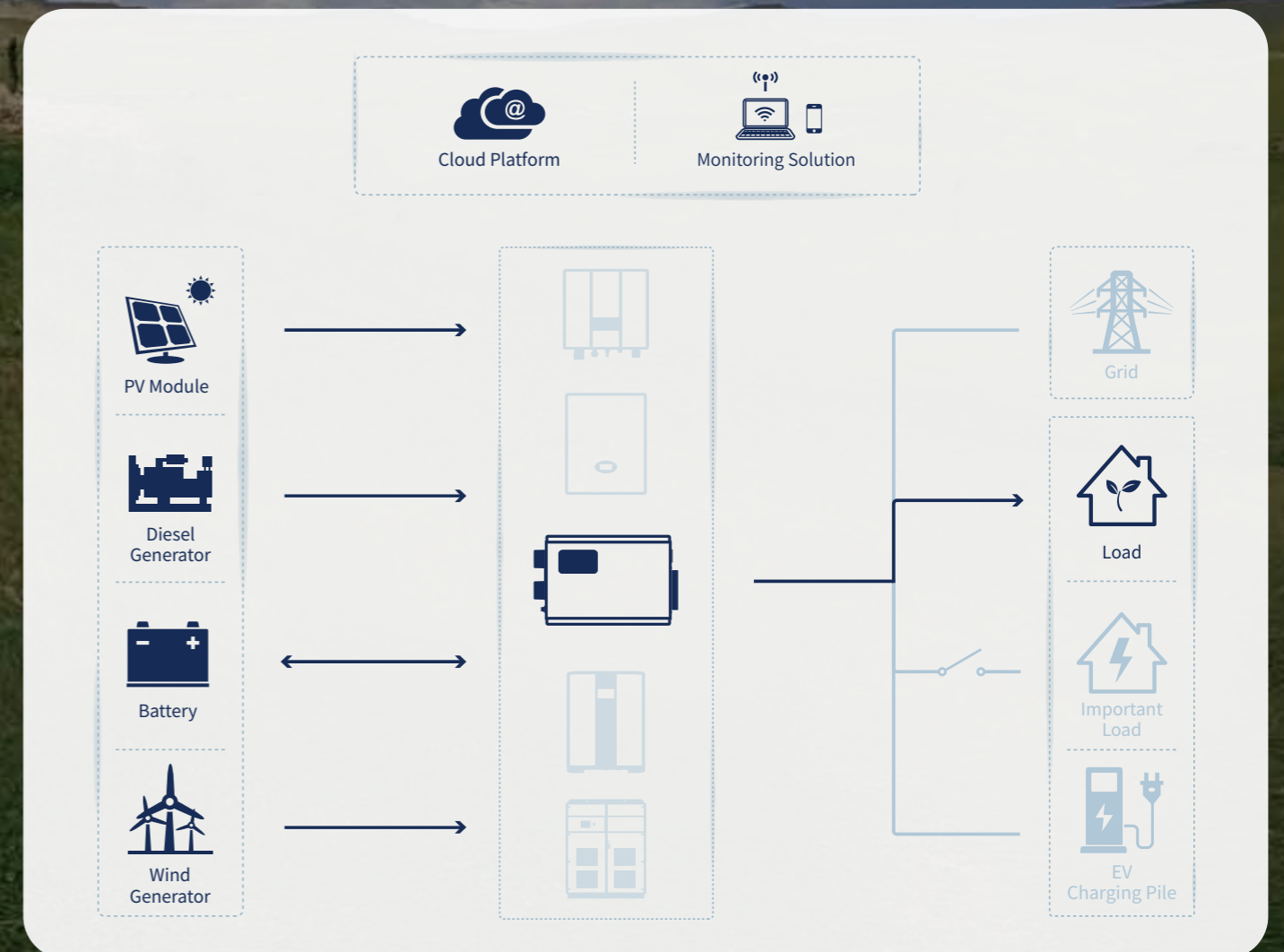


BN1012C/ E  
BN1024C/ E  
BN1512C/ E  
BN2012C/ E  
BN2024C/ E

BN3012C/ E  
BN3024C/ E  
BN4048C/ E  
BN5048C/ E  
BN6048C/ E



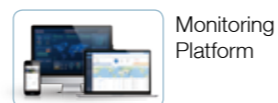
BPD0K7TN(AC)  
BPD1K5TN(AC)  
BPD2K2TN(AC)  
BPD004TNAC  
BPD2K2TRAC  
BPD004TRAC  
BPD5K5TRAC





# iMars BN

BN1012C/E | BN1524C/E  
 BN1024C/E | BN2012C/E  
 BN1512C/E | BN2024C/E



## Efficient

- Multiple charging topology, to maximize battery performance.
- Multiple working priority settings.
- Electricity bypass quick charging function.
- Solar panel MPPT charging technology.

## Smart

- Global integrated monitor management, APP with one-button registration.
- Parallel operation up to 6 units.

## Reliable

- Over-load and short-circuit protection.
- Capable of linear load or non-linear load.

## Simple

- Easy to maintain.

|                                                  | BN1012C/E                                                                                                                                                               | BN1024C/E | BN1512C/E | BN1524C/E | BN2012C/E   | BN2024C/E |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|-----------|-------------|-----------|
| <b>Line mode</b>                                 |                                                                                                                                                                         |           |           |           |             |           |
| AC input voltage (V)                             | 220/230/240                                                                                                                                                             |           |           |           |             |           |
| AC output voltage range (V)                      | 155~272(±2%)                                                                                                                                                            |           |           |           |             |           |
| Rated frequency (Hz)                             | 50/60(auto detection)                                                                                                                                                   |           |           |           |             |           |
| Frequency range (Hz)                             | 47±0.3~55±0.3 for 50; (57±0.3~65-0.3 for 60)                                                                                                                            |           |           |           |             |           |
| 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                                                                                                                                                                      |           |           |           |             |           |
| <b>Invert mode</b>                               |                                                                                                                                                                         |           |           |           |             |           |
| 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)                      | 50±0.3/60±0.3                                                                                                                                                           |           |           |           |             |           |
| Efficiency                                       | >88%                                                                                                                                                                    |           |           |           |             |           |
| Over-load protection                             | (110%<load<125%) ±10%:Fault(shutdown output) after 15min;<br>(125%<load<150%) ±10%:Fault(shutdown output) after 60s;<br>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 model:12/11; 24VDC model:24/22                                                                                                                                    |           |           |           |             |           |
| DC input voltage range (V)                       | 10.0~16.0, ±0.6Vdc:12VDC model(*2 is 24VDC input model,*4 is 48VDC input model)<br>(12VDC model:low alarm:10.5V; shut down:10V; high fault:16V; high recovery:15.5V)    |           |           |           |             |           |
| Main operating mode                              | 0-6 level:grid priority; 7-9 level battery priority                                                                                                                     |           |           |           |             |           |
| <b>Charge (Line)</b>                             |                                                                                                                                                                         |           |           |           |             |           |
| Charge current (A)                               | 35                                                                                                                                                                      | 20        | 45        | 25        | 65          | 35        |
| Charge current regulation (A)                    | ± 5                                                                                                                                                                     |           |           |           |             |           |
| Battery voltage range (V)                        | 12VDC model:10-15.7; 24VDC model:20-31.4                                                                                                                                |           |           |           |             |           |
| Charge short-circuit protection                  | Circuit breaker                                                                                                                                                         |           |           |           |             |           |
| Breaker current (A)                              | 10                                                                                                                                                                      |           |           |           | 30          |           |
| Over charge protection                           | Bat. V ≥ 15.7 is 12VDC model>(*2 is 24VDC input model,*4is 48VDC model)every 1s & fault after 60s                                                                       |           |           |           |             |           |
| <b>Charge (Solar) (E series is not included)</b> |                                                                                                                                                                         |           |           |           |             |           |
| MPPT voltage range (V)                           | 12VDC model:15-55; 24VDC model:18-78                                                                                                                                    |           |           |           |             |           |
| Max. PV input voltage (V)                        | 12VDC model:70; 24VDC model:100                                                                                                                                         |           |           |           |             |           |
| Max. PV open circuit voltage (V)                 | 12VDC model:56; 24VDC model: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                                                                                                                                      |           |           |           |             |           |
| <b>Others</b>                                    |                                                                                                                                                                         |           |           |           |             |           |
| Dimension (L x W x H mm)                         | 410x264x180                                                                                                                                                             |           |           |           | 460x264x180 |           |
| 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%~95%, condensation                                                                                                                                                    |           |           |           |             |           |
| Communication interface                          | RS485; GPRS, WiFi                                                                                                                                                       |           |           |           |             |           |
| Safety certificate / EMC certificates            | CE(EN62040-1, EN62040-2)/C2                                                                                                                                             |           |           |           |             |           |
| Warranty (years)                                 | 1                                                                                                                                                                       |           |           |           |             |           |



# iMars BN

BN3012C/E | BN5048C/E  
 BN3024C/E | BN6048C/E  
 BN4048C/E



## Efficient

- Multiple charging topology, to maximize battery performance.
- Multiple working priority settings.
- Electricity bypass quick charging function.
- Solar panel MPPT charging technology.

## Smart

- Global integrated monitor management, APP with one-button registration.
- Parallel operation up to 6 units.

## Reliable

- Over-load and short-circuit protection.
- Capable of linear load or non-linear load.

## Simple

- Easy to maintain.

|                                                  | BN3012C/E                                                                                                                                                               | BN3024C/E | BN4048C/E   | BN5048C/E   | BN6048C/E |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|-------------|-----------|
| <b>Line mode</b>                                 |                                                                                                                                                                         |           |             |             |           |
| AC input voltage (V)                             | 220/230/240                                                                                                                                                             |           |             |             |           |
| AC output voltage range (V)                      | 155~272(±2%)                                                                                                                                                            |           |             |             |           |
| Rated frequency (Hz)                             | 50/60(auto detection)                                                                                                                                                   |           |             |             |           |
| Frequency range (Hz)                             | 47±0.3~55±0.3 for 50; (57±0.3~65-0.3 for 60)                                                                                                                            |           |             |             |           |
| 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          |             |           |
| <b>Invert mode</b>                               |                                                                                                                                                                         |           |             |             |           |
| 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)                      | 50±0.3/60±0.3                                                                                                                                                           |           |             |             |           |
| Efficiency                                       | >88%                                                                                                                                                                    |           |             |             |           |
| Over-load protection                             | (110%<load<125%) ±10%:Fault(shutdown output) after 15min;<br>(125%<load<150%) ±10%:Fault(shutdown output) after 60s;<br>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 model:12/11; 24VDC model:24/22                                                                                                                                    |           | 48/ 44      |             |           |
| DC input voltage range (V)                       | 10.0~16.0, ±0.6Vdc:12VDC model(*2 is 24VDC input model,*4 is 48VDC input model)<br>(12VDC model:low alarm:10.5V; shut down:10V; high fault:16V; high recovery:15.5V)    |           |             |             |           |
| Main operating mode                              | 0-6 level:grid priority; 7-9 level battery priority                                                                                                                     |           |             |             |           |
| <b>Charge (Line)</b>                             |                                                                                                                                                                         |           |             |             |           |
| Charge current (A)                               | 75                                                                                                                                                                      | 50        | 35          | 40          | 50        |
| Charge current regulation (A)                    | ± 5                                                                                                                                                                     |           |             |             |           |
| Battery voltage range (V)                        | 12VDC model:10-15.7; 24VDC model: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 model>(*2 is 24VDC input model,*4is 48VDC model)every 1s & fault after 60s                                                                        |           |             |             |           |
| <b>Charge (Solar) (E series is not included)</b> |                                                                                                                                                                         |           |             |             |           |
| MPPT voltage range (V)                           | 12VDC model:15-55, 24VDC model:18-78                                                                                                                                    |           | 50-130      |             |           |
| Max. PV input voltage (V)                        | 12VDC model:70, 24VDC model:100                                                                                                                                         |           | 200         |             |           |
| Max. PV open circuit voltage (V)                 | 12VDC model:56, 24VDC model:80                                                                                                                                          |           | 130         |             |           |
| 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                                                                                                                                      |           |             |             |           |
| <b>Others</b>                                    |                                                                                                                                                                         |           |             |             |           |
| Dimension (L x W x H mm)                         | 460x264x180                                                                                                                                                             |           | 510x264x180 | 555x264x180 |           |
| Weight (kg)                                      | 26.3                                                                                                                                                                    | 26        | 29.2        | 34.5        | 37.3      |
| 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%~95%, condensation                                                                                                                                                    |           |             |             |           |
| Communication interface                          | RS485; GPRS、WiFi                                                                                                                                                        |           |             |             |           |
| Safety certificate / EMC certificates            | CE(EN62040-1, EN62040-2)/C2                                                                                                                                             |           |             |             |           |
| Warranty (years)                                 | 1                                                                                                                                                                       |           |             |             |           |

# iMars BPD

## Solar Pumping Inverter

BPD0K7TN(AC) | BPD2K2TRAC  
 BPD1K5TN(AC) | BPD004TRAC  
 BPD2K2TN(AC) | BPD5K5TRAC  
 BPD004TNAC



Keypad

### Efficient

- One inverter can be connected with multiple pumps, support vector control.
- Optional water level detection and diesel engine start/stop.
- Wider operation voltage range, multi PV strings configuration 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.

### Simple

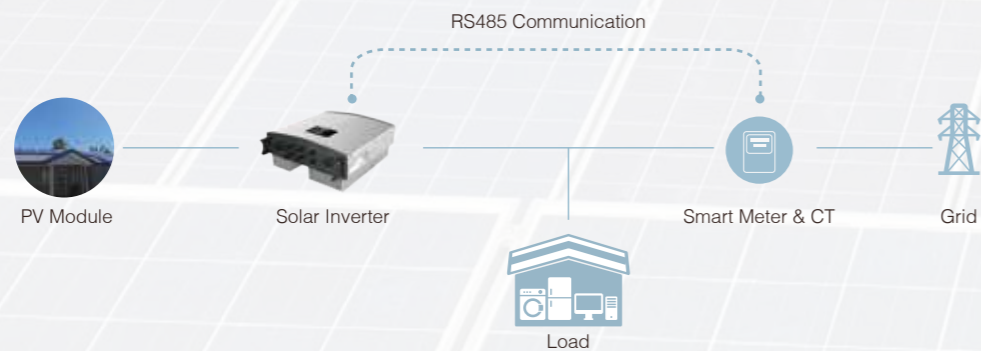
- Easy to install and operate.

|                                  | BPD0K7TN(AC)                                                                                       | BPD1K5TN(AC)       | BPD2K2TN(AC)       | BPD004TNAC                               | BPD2K2TRAC         | BPD004TRAC  | BPD5K5TRAC |
|----------------------------------|----------------------------------------------------------------------------------------------------|--------------------|--------------------|------------------------------------------|--------------------|-------------|------------|
| <b>Input (DC)</b>                |                                                                                                    |                    |                    |                                          |                    |             |            |
| Max. DC voltage (V)              | 450                                                                                                |                    |                    | 800                                      |                    |             |            |
| Starting voltage (V)             | 80                                                                                                 | 100                |                    | 220                                      |                    |             |            |
| Minimum working voltage (V)      | 60                                                                                                 | 80                 |                    | 180                                      |                    |             |            |
| MPPT operating voltage range (V) | 80-400                                                                                             | 100-400            |                    | 220-750                                  |                    |             |            |
| Input channel                    | One MC4 connector                                                                                  | Two MC4 connectors |                    | One MC4 connector                        | Two MC4 connectors |             |            |
| Max. DC current (A)              | 9                                                                                                  | 12                 | 12                 | 20                                       | 9                  | 20          | 20         |
| <b>Bypass input (AC)</b>         |                                                                                                    |                    |                    |                                          |                    |             |            |
| Input voltage (Vac)              | 220/230/240(1PH)(-15%~+10%)                                                                        |                    |                    | 380(3PH)(-15% ~ 440(+10%)                |                    |             |            |
| Input frequency (Hz)             | 47-63                                                                                              |                    |                    |                                          |                    |             |            |
| Input connect method             | 1P2L(L,N,PE)                                                                                       |                    |                    | 3P4L(R,S,T,PE)                           |                    |             |            |
| <b>Output (AC)</b>               |                                                                                                    |                    |                    |                                          |                    |             |            |
| Rated power (W)                  | 750                                                                                                | 2200               | 4000               | 2200                                     | 4000               | 5500        |            |
| Rated current (A)                | 5.1(1PH)<br>4.2(3PH)                                                                               | 14(1PH)<br>10(3PH) | 25(1PH)<br>16(3PH) | 5.5                                      | 9.5                | 14          |            |
| Output wiring mode               | 1P2L:1PH motor 1PH control 2P3L:1PH motor 2PH control<br>3P3L: Connected to 3PH asynchronous motor |                    |                    | 3P3L:Connected to 3PH asynchronous motor |                    |             |            |
| Output frequency (Hz)            | 1 ~ 400                                                                                            |                    |                    |                                          |                    |             |            |
| <b>Performance</b>               |                                                                                                    |                    |                    |                                          |                    |             |            |
| Control mode                     | V/F                                                                                                |                    |                    |                                          |                    |             |            |
| Motor type                       | Asynchronous motor (1PH/3PH)                                                                       |                    |                    | Asynchronous motor (3PH)                 |                    |             |            |
| <b>Others</b>                    |                                                                                                    |                    |                    |                                          |                    |             |            |
| Dimensions (WxDxH) (mm)          | 255x300x137                                                                                        |                    |                    | 410x360x160                              | 337x360x160        | 460x360x160 |            |
| weight (kg)                      | 6.4                                                                                                | 7                  | 7                  | 13.5                                     | 10.8               | 14.4        | 14.5       |
| Degree of protection             | IP65                                                                                               |                    |                    |                                          |                    |             |            |
| Cooling method                   | Natural cooling                                                                                    |                    |                    |                                          |                    |             |            |
| HMI                              | LED screen extend(not support LCD screen)                                                          |                    |                    |                                          |                    |             |            |
| <b>Communication</b>             |                                                                                                    |                    |                    |                                          |                    |             |            |
| External communication           | RS485/3 digital input                                                                              |                    |                    |                                          |                    |             |            |
| Communication interface          | Multi-core waterproof connector                                                                    |                    |                    |                                          |                    |             |            |
| <b>Certification</b>             |                                                                                                    |                    |                    |                                          |                    |             |            |
| Safety certificate               | CE; EMC meets the requirements of IEC61800-3 C3.                                                   |                    |                    |                                          |                    |             |            |
| <b>Operating environment</b>     |                                                                                                    |                    |                    |                                          |                    |             |            |
| Ambient temperature              | -25°C ~ +60°C (derate after 45°C)                                                                  |                    |                    |                                          |                    |             |            |
| Working altitude (m)             | 3000(more than 2000m derating)                                                                     |                    |                    |                                          |                    |             |            |
| Design life                      | 5 years(warranty 18months)                                                                         |                    |                    |                                          |                    |             |            |

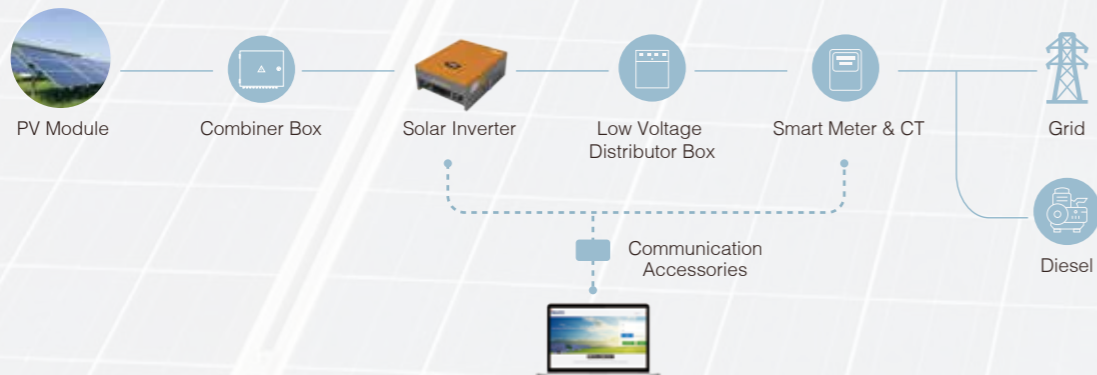


# Smart power output control system

## Solution For Residential PV Plants



## Solution For Commercial PV Plants



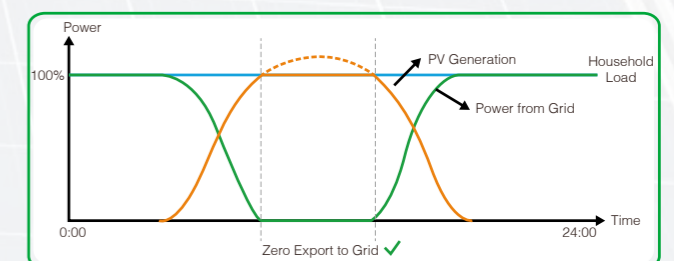
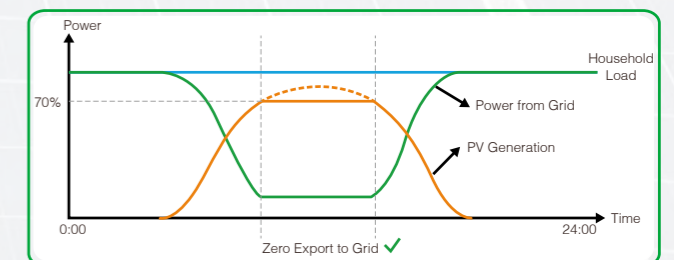
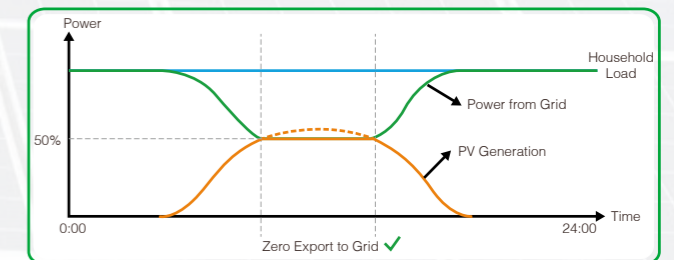
## Description

With intelligent output power control function, the system detects the power from grid in real time. Based on the principle that the direction of power flow can be only from grid to load, the inverter adjusts its output power to maximize use of PV energy while prevent energy from feeding back to grid at the same time.

## Advantages

1. Adaptive to different grid regulation (FIT, NEM...) and system capacity;
2. High cost-efficient;
3. Easy to install;
4. 0~100% output power automatically control.

System with intelligent anti-feedback function



## Anti-feedback Device Package

ATF200-A



Current Transformer x 1  
Single Phase Smart Meter x 1

ATF200-B



Current Transformer x 3  
Three Phase Smart Meter x 1



# Monitoring Solution

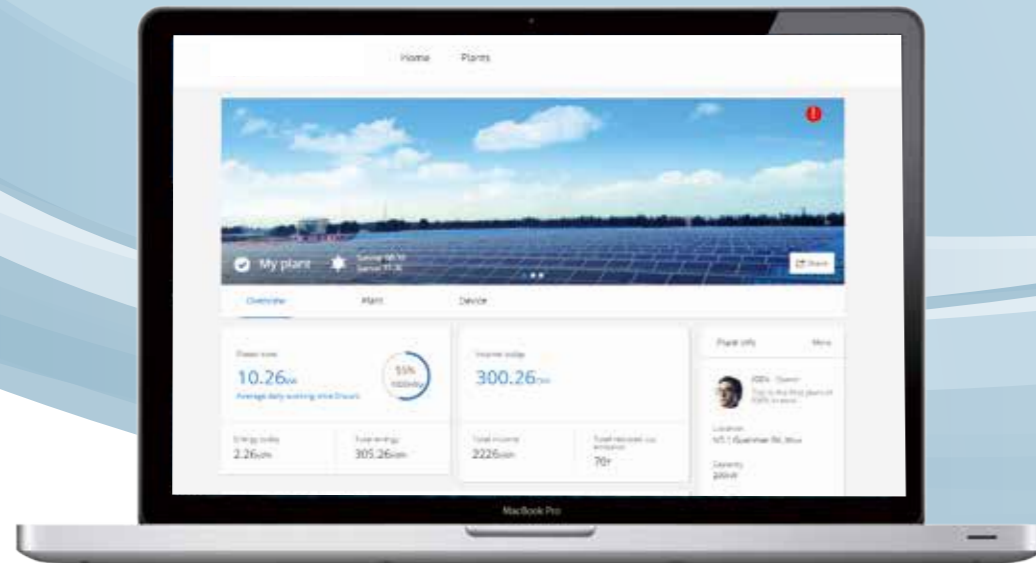
We can provide our customers with a flexible internet monitoring solution which is suitable for residential, commercial rooftop systems and PV power plants. System monitoring device is user-friendly and reliable. It can transmit Real-time data to our server via internet. Customers can login website or use APPs to check power plant information.



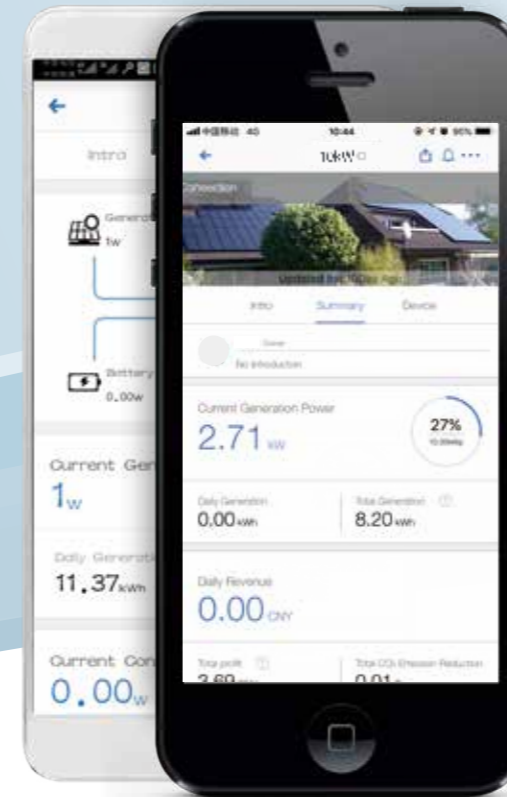


## SOLARMAN HOME WEB

home.solarman.cn

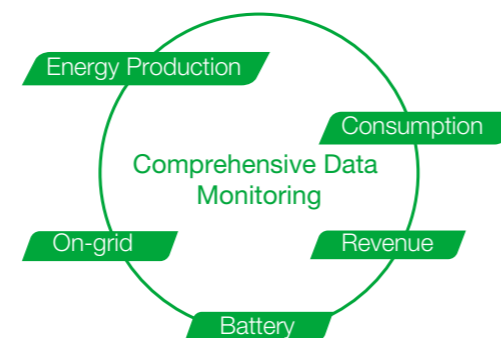


## SOLARMAN HOME APP



One-step management PV platform to share with 150,000 users worldwide

- Web-based management and monitoring, with cloud platform support.
- Compatible with various equipment: string inverter, battery storage inverter, micro-inverter, combiner, meter, meteorological sensor, etc.
- Various & intuitive icon, clearly display plant data: historical/real-time yield, solar source, etc.
- Real-time alerts & customized reports.
- Open API for easy integration into corporate or personal websites
- New social-networking function: follow other plants, share ideas.
- Stimulate PV plant building, assess system revenue before building actual plants.



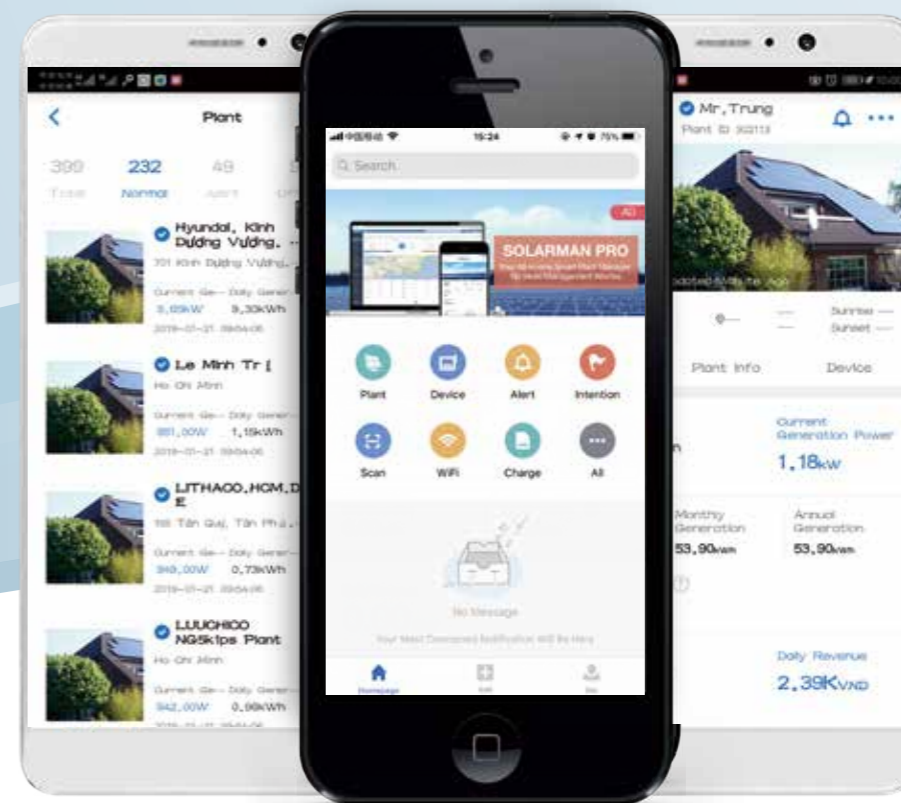
- Compatible with various devices, monitor system status comprehensively.
- New configuration function, simple on-site configuration merely with a smartphone.
- Customized PV plant profile, upload pictures of your own plants.
- Interact and share experience with SOLARMAN users worldwide.

# SOLARMAN PRO WEB

pro.solarman.cn



# SOLARMAN PRO APP



One-step management PV platform to share with 150,000 users worldwide

## 5 Function modules, lifecycle management of PV plant

### Plant Construction

- PV resource evaluation
- Site selection and analysis
- Plant simulation
- Energy/income forecast

### Plant O&M

- Plant data monitoring Real-time fault alarm
- Remote troubleshooting & debugging
- Online work order management
- Analysis & statistics on fault

### Analysis & Statistics

- Plant data statistics
- PR analysis and comparison
- Customized reports
- Regular online delivery of reports

### Resource Sharing

- Global information sharing
- Online business cooperation
- Installer/O&M providers recommendations
- Fast plant construction

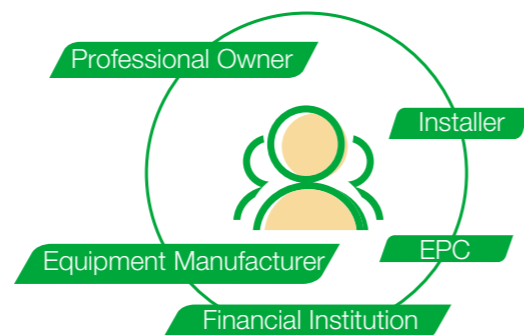
Professional Owner

Installer

Equipment Manufacturer

EPC

Financial Institution



- GPS to facilitate site selection and plant construction.
- Connect logger directly, sending control commands (connect logger remotely to send control commands).
- Calculate estimated plant profit.
- Link plant owner.
- Personalized-recommending system.





# Stick Logger

GPRS / WIFI / 5G / ETHERNET



- External light indicator, logging status at a glance.
- Plug and play, powered by inverter, no external power needed, easy to install.
- Independent from inverter to protect parts inside inverter, eliminate potential problems.
- Water-proof design, resistant to bad weather, enhance stability.
- External design, easier to replace faulty equipment.
- End user can monitor yields at any time with SOLARMAN APP.

|                           | LSG-3                                       | LSW-3                     | LSE-3    |
|---------------------------|---------------------------------------------|---------------------------|----------|
| Remote communication      | GPRS                                        | WiFi                      | Ethernet |
| Frequency                 | GSM850/EGSM900/DCS1800/PCS1900MHz           | 2.142GHz~2.484GHz         | 10M/100M |
| Antenna                   | External GPRS Rod antenna                   | External WiFi Rod antenna | —        |
| Local communication       | RS485/RS232/TTL                             |                           |          |
| Voltage                   | DC4.7V~DC15V                                |                           |          |
| Power consumption (W)     | 3                                           | 1                         | 1        |
| SIM card                  | Chip card                                   | —                         |          |
| Memory                    | 2MBYTE FLASH                                |                           |          |
| Operating temperature     | -35°C~+80°C                                 |                           |          |
| Operating humidity        | <90%, non-condensation                      |                           |          |
| Number of connections     | 1                                           |                           |          |
| Communication rate        | 9600bps(1200-115200bps Adjustable)          |                           |          |
| Data collection intervals | Default 5min(1-15min Optional)              |                           |          |
| User configuration        | AT+Instruction Set                          |                           |          |
|                           | Remote server                               |                           |          |
|                           | Bluetooth 3.0 +EDR Configuration and access | —                         |          |
| Firmware upgrade          | Remote                                      |                           |          |
| Others                    | Real-time control, data resuming transfer   |                           |          |

# Inverter Logger

GPRS / WCDMA

WIFI / ETHERNET



## GPRS / WCDMA:

- Ensure completeness of collected data. **Data resuming**
- Devices can be upgraded and debugged remotely for easy maintenance. **Remote upgrade**
- Realtime alerts with immediate notification for fast troubleshooting. **Alert notification**
- Industrial-level SIM chip integrated for stable operation and high performance. **Stable performance**
- High network coverage around the world. **Global roaming**
- Quick installation and easy operation with Plug & Play function. **Plug & Play**
- Suitable for rural areas where network connection is not available.
- Check the system status anytime and anywhere via online portal or app, no additional software required.

## WIFI / ETHERNET:

- Ensure completeness of collected data. **Data resuming**
- Devices could be upgraded and debugged remotely for easy maintenance. **Remote upgrade**
- Realtime alerts with immediate notification for fast troubleshooting. **Alert notification**
- Embedded Web Server for quick data access and simple configuration.
- Check the system status anytime and anywhere via online portal or app, no additional software required.
- 100M Ethernet port for high-speed data transmission via cable network.

|                                          | LIG-1                                                       | LIM-1                                                       |
|------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| <b>General</b>                           |                                                             |                                                             |
| Max. number of inverters                 | Basic ver.:1<br>Advanced ver.:1-4<br>Professional ver.:1-10 | Basic ver.:1<br>Advanced ver.:1-4<br>Professional ver.:1-10 |
| Inverter communication                   | RS485                                                       | RS485                                                       |
| Remote communication                     | GSM/WCDMA                                                   | WiFi(802.11b/g/n)                                           |
| Communication rate                       | 1200-57600bps(Adjustable)                                   | 1200-19200bps(Adjustable)                                   |
| Frequency                                | 850/900/1800/1900MHz/2100MHz                                | 2.4GHz                                                      |
| Communication range                      | —                                                           | 400m in outdoor open area without obstruction               |
| Transmitting power                       | 2W(Max)/1W(Min)                                             | 802.11b/g/n:+20dBm/+18dBm/15dBm(Max)                        |
| Data collection intervals                | 5minutes(Default)/1-15minutes (Optional)                    |                                                             |
| Memory                                   | EEPROM                                                      |                                                             |
| Preferences setting                      | Serial port AT instruction                                  | Web Server/Serial port AT instruction                       |
| Data access                              | 485/Remote server                                           | Serial port/WiFi point-to-point/Remote server               |
| Status display                           | 4 LEDs                                                      | 4 LEDs                                                      |
| <b>Electrical</b>                        |                                                             |                                                             |
| Input voltage                            | DC 5V(+/-5%)                                                |                                                             |
| Static power consumption (W)             | <2                                                          | <1.6                                                        |
| Max. instantaneous power consumption (W) | <3                                                          | <2.5                                                        |
| <b>Environmental</b>                     |                                                             |                                                             |
| Operating temperature                    | -25°C~+65°C                                                 | -10°C~+65°C                                                 |
| Operating humidity                       | 10%-90% Relative humidity, non-condensation                 |                                                             |
| Storage temperature                      | -25°C~+65°C                                                 | -40°C~+85°C                                                 |
| Storage humidity                         | <40%                                                        |                                                             |
| Protection class                         | IP21                                                        |                                                             |
| <b>Physical</b>                          |                                                             |                                                             |
| Dimension (L x W x Hmm)                  | 110x80x24                                                   | 110x80x26                                                   |
| Weight (g)                               | 102                                                         | 108                                                         |
| <b>Other</b>                             |                                                             |                                                             |
| Installation method                      | Wall mounting                                               |                                                             |





## Our service

- Key informaton needed for maintenance
- Model, product serial No.
  - Fault description
  - Customer location and contacts

| 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 |



**invt**  
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 INVT Solar Technology (Shenzhen) Co., Ltd  
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**Tel:** +86 0755-23535353 (Sales, Technical Consultation, After-sales)  
**Fax:** 0086 755 8631 2880  
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**Mexico**  
**Contact:** Jorge  
**Add:** Miguel Hidalgo, Mexico City, Mexico  
**TEL:** +52 55 2065 7330  
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**TEL:** +66(0)968 103 664  
**Email:** gukunpeng@tom.com

**Saudi Arabia**  
**Contact:** James  
**Email:** solar@invt.com.cn

**India (Gurgaon)**  
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**TEL:** +43 175 4428  
**Email:** lizhongli@invt.com.cn

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**Contact:** Ben Li  
**Add:** Unit B, 107 Asquith St, Silverwater, NSW, 2128  
**TEL:** +43 175 4428  
**Email:** lizhongli@invt.com.cn





## MEXICO 8KW RESIDENTIAL SOLAR SYSTEM

Location: Mexico    Capacity: 8KW    Model: MG2KTL, MG6KTL

## Australia 5KW RESIDENTIAL SOLAR SYSTEM

Location: Australia    Capacity: 5KW    Model: MG5KTL



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: Hunan, China  
Capacity: 1.8MW  
Model: BG33KTR



Location: The Netherlands  
Capacity: 600KW  
Model: BG35KTR

## ZHEJIANG 2.1MW COMMERCIAL SOLAR PLANT

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



## WENZHOU 1.2MW COMMERCIAL SOLAR PLANT

Location: Wenzhou, China    Capacity: 1.2MW    Model: BG30KTR







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



Location: Australia Capacity: 2.3MW Model: BG35KTR

## AUSTRALIA 2.3MW SOLAR PLANT



Location: Switzerland  
Capacity: 580KW  
Model: BG33KTR



# HUNGARY 150KW COMMERCIAL SOLAR SYSTEM

Location: Hungary    Capacity: 150KW    Model: BG50KTR



Location: Australia  
Capacity: 35KW  
Model: BG30KTR, MG5KTL



Location: Shenzhen, China  
Capacity: 40KW  
Model: BG40KTR



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



# ZHEJIANG 2.1MW COMMERCIAL SOLAR PLANT

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





Location: Xinjiang,China    Capacity: 60MW    Model: BG30KTR

## XINJIANG 60MW SOLAR PLANT



## AUSTRALIA 6MW SOLAR PLANT

Location: Australia    Capacity: 6MW    Model: BG30KTR



Location: Netherlands  
Capacity: 180KW  
Model: BG30KTR



Location: India  
Capacity: 200KW  
Model: BG50KTR



# DONGGUAN 2.5WM COMMERCIAL SOLAR PLANT

Location: Dongguan,China    Capacity: 2.5MW    Model: BG35KTR



# HEBEI 13.8MW HILL SOLAR PLANT

Location: Hebei, China    Capacity: 13.8MW    Model: BG33KTR



Location: Shanxi, China

Capacity: 10MW

Model: BG10KTR







Location: Melbourne, Australia  
Capacity: 6KW  
Model: MG6KTL



Location: Belgium  
Capacity: 4KW  
Model: MG4KTL



Location: Cambodia  
Capacity: 20KW  
Model: BD5KTL



Location: Henan, China  
Capacity: 5KW  
Model: BD5KTL

## ARMENIA 10KW HYBRID SOLAR SYSTEM

Location: Armenia    Capacity: 10KW    Model: BD5KTL



Location: Xinjiang, China  
Capacity: 1KW  
Model: BN1024C



Location: Thailand  
Capacity: 1KW  
Model: BN1024C



Location: Nigeria    Capacity: 6KW    Model: BN1024C

## NIGERIA 6KW OFF-GRID SOLAR SYSTEM





Location: Jiangsu,China Capacity: 500kW/1.8MWh Model: BD500KTR-T

# JIANGSU 500KW/1.8MWH DISTRIBUTED ENERGY STORAGE SYSTEM



Location: Guangdong,China Capacity: 500kW/1.8MWh Model: BD500KTR-T



Location: Dongguan,China Capacity: 500kW/1.5MWh Model: BD500KTR-T



Location: Foshan,China Capacity: 375kW/1.2MWh Model: BD100KTR,BD250KTR-T



Location: Dongguan,China Capacity: 500kW/300kWh Model: BD500KTR



# CHINA 500KW/1MWH DISTRIBUTED ENERGY STORAGE SYSTEM

Location: Guangdong,China Capacity: 500kW/1MWh Model: BD500KTR