iMars B Series
Three Phase Grid-tied Solar Inverters

Description
Mars B three-phase grid-tied solar inverters adopt the latest technologies combination of T type three level topology and I+B+FM, providing flexible system configuration and monitoring solutions for household, commercial and power plant systems.

Features
• Dual MPPTs work independently and allow unbalance input power. One string maximum input is up to 60% of Max DC power.
• High efficiency and stable performance at entire input voltage and output power range.
• Max. efficiency is up to 98.3%.
• Wide input voltage range gives more possibilities for accepting different string configuration and different type of PV modules.
• Bus capacitor adopts advanced film capacitor, designed with the latest thermal simulation technology for longer lifespan.
• Integrated intelligent DC combiner and surge protection improve system’s flexibility and lower the cost.
• 12V 100mA auxiliary DC power interface is optional for system expansion.
• AC output power is adjustable during 1~100%.
• Reactive power control and power factor adjustable: 0.8 leading – 0.8 lagging.
• RS485, Ethernet, WIFI communication modes are optional for realizing multiple monitoring solutions via PC, mobile phones, internet etc. platforms.

Power Efficiency

Input (DC)
- Max. DC Voltage (V): 1000
- Starting Voltage (V): 200
- Min. Operation Voltage: 180
- MPPT Operating Voltage Range: 300 - 800V
- Rated Power Voltage Range: 350 - 800V
- Number Of MPPT / String Per MPPT: 2/3 or 2/1 (Integrated Combiner Box)
- Max. DC Power (W): 4400
- Max. DC Current (A) Per MPPT x Number Of MPPT: 14x2
- BG8KTR
- BG10KTR
- BG12KTR
- BG15KTR
- BG17KTR

Output (AC)
- Rated Power (W): 4000
- Max. AC Current (A): 13
- Rated AC Voltage And Range: 3/N/PE, 120/208Vac
- Rated Grid Frequency And Range: 60Hz (57~61.5Hz)
- Power Factor: -0.8~+0.8 (Adjustable)
- THD: < 3% (at rated power)
- AC Connection: Three-phase (L1, L2, L3, N, PE)

System
- Cooling: Smart cooling
- Max. Efficiency: 97.60%
- Euro-efficiency: 97.60%
- MPPT Efficiency: 99.90%
- Protection Degree: IP65
- Consumption At Night: <0.5W
- Isolation Mode: Transformerless
- Operating Temperature: -25°C~+60°C, derate after 45°C (-77°F~+140°F, derate after 113°F)
- Relative Humidity: 0~95%, no condensation
- Protection Functions: DC isolation monitoring, DC monitoring, grounding fault monitoring, grid monitoring, island protection, overvoltage and short circuit protection, etc
- Noise: < 50dB

Display And Communication
- Display: 3.5 inches LCD display, support backlit display
- System Language: English, Chinese, German, Dutch
- Key: Integrated
- Communication Mode: RS485 (Standard), WIFI, Ethernet (Optional)

Mechanical Parameters
- Dimension (H x W x D mm): 488x150x24
- Weight (kg): 33 (M4A) 38 (M8A)
- Installation: Wall-mounting

Others
- DC Terminal: MC4
- Certifications: VDE0126-1-1, VDE-AR-N4105, CQC, G59/3, C10/11, AS4777/3100, EN61000-6-1, EN61000-11, IEC62109-1-2010, PEA
iMars B Series
Three Phase Grid-tied Solar Inverters

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

Features
- Dual MPPTs work independently and allow unbalanced input power. One string maximum input is up to 60% of Max DC power.
- High efficiency and stable performance at entire input voltage and output power range.
- Max. efficiency is up to 98.6%.
- Wide input voltage range gives more possibilities for accepting different string configuration and different type of PV modules.
- Bus capacitor adopts advanced film capacitor, designed with the latest thermal simulation technology for longer lifespan.
- Integrated intelligent DC combiner and surge protection improve system's flexibility and lower the cost.
- 12V 100mA auxiliary DC power interface is optional for system expansion.
- AC output power is adjustable during 0~100%.
- Reactive power control and power factor adjustable: 0.8 leading ~ 0.8 lagging.
- RS485, Ethernet, WIFI communication modes are optional for realizing multiple monitoring solutions via PC, mobile phones, internet etc. platforms.

Power Efficiency

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>BG10KTR</th>
<th>BG12KTR</th>
<th>BG15KTR</th>
<th>BG40KTR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. DC Voltage (V)</td>
<td>1000</td>
<td>1200</td>
<td>1500</td>
<td>4000</td>
</tr>
<tr>
<td>Starting Voltage (V)</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Min. Operation Voltage</td>
<td>280</td>
<td>280</td>
<td>280</td>
<td>280</td>
</tr>
<tr>
<td>MPPT Operating Voltage Range (V)</td>
<td>450~800</td>
<td>480~800</td>
<td>480~800</td>
<td>580~800</td>
</tr>
<tr>
<td>Rated Power Voltage Range (V)</td>
<td>480~800</td>
<td>480~800</td>
<td>480~800</td>
<td>580~800</td>
</tr>
<tr>
<td>Number of MPPT / String Per MPPT</td>
<td>2/4/2 (Integrated Combiner Box)</td>
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<td>2/4/2 (Integrated Combiner Box)</td>
</tr>
<tr>
<td>Max. DC Power (W)</td>
<td>10400</td>
<td>13000</td>
<td>15600</td>
<td>40800</td>
</tr>
<tr>
<td>Max. DC Current (A) Per MPPT</td>
<td>25x2</td>
<td>30x2</td>
<td>33x2</td>
<td>33x2</td>
</tr>
<tr>
<td>DC Switch Integration</td>
<td>Integration</td>
<td>Integration</td>
<td>Integration</td>
<td>Integration</td>
</tr>
<tr>
<td>Rated Power (W)</td>
<td>10000</td>
<td>12000</td>
<td>15000</td>
<td>40000</td>
</tr>
<tr>
<td>Rated AC Voltage And Range</td>
<td>3N/PE,277/480V</td>
<td>3N/PE,277/480V</td>
<td>3N/PE,277/480V</td>
<td>3N/PE,277/480V</td>
</tr>
<tr>
<td>Rated Grid Frequency And Range</td>
<td>50Hz(47<del>51.5Hz) / 60Hz(57</del>61.5Hz)</td>
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</tr>
<tr>
<td>Power Factor</td>
<td><del>0.8</del>1.0 (Adjustable)</td>
<td><del>0.8</del>1.0 (Adjustable)</td>
<td><del>0.8</del>1.0 (Adjustable)</td>
<td><del>0.8</del>1.0 (Adjustable)</td>
</tr>
<tr>
<td>THD</td>
<td>&lt;3% (all rated power)</td>
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<td>AC Connection</td>
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</table>

System
- Cooling: Smart cooling
- Max. Efficiency: 98.40% 98.40% 98.50% 98.60%
- Euro-efficiency: 98.00% 98.00% 98.00% 98.20%
- MPPT Efficiency: 99.9%
- Protection Degree: IP65
- Consumption At Night: <5.5W
- Isolation Mode: Transformerless
- Operating Temperature: -25°C~+60°C, derate after 40°C (+77°F~+140°F, derate after 113°F)
- Relative Humidity: 0~95%, no condensation
- Protection: DC isolation monitoring, DC monitoring, grounding fault monitoring, grid monitoring, island protection, overvoltage and short circuit protection, etc.
- Noise: <50dB <55dB

Display and Communication
- Display: 3.5 inches LCD display, support backlit display
- System Language: English, Chinese, German, Dutch
- Key: Integrated
- Communication Mode: RS485 (Standard), WIFI, Ethernet (Optional)

Mechanical Parameters
- Dimension (H x W x D mm): 660x525x220 660x525x250
- Weight (kg): 48.1(106pound) 50.1(110pound) 52.1(115pound) 52.1(115pound)
- Installation: Wall mounting

Others
- DC Terminal: MC4
- Certifications: TUV, CE, VDE0126-1-1, VDE-AR-N4105, QCC EN61000-6-1, EN61000-11, IEC62109-1-2, IEC62109-1-2, PEACERT, TUV, CE, VDE0126-1-1, VDE-AR-N4105, QCC EN61000-6-1, EN61000-11, IEC62109-1-2, IEC62109-1-2, PEACERT

Inverter Topology

iMars Series Grid-tied Solar Inverters Catalog
Monitoring System Solution

iMars Solar Power System
Monitoring System Solution

- Home
- Outdoors & Travel
- Office & Travel

Win Expert App
PhoneExpert App
InfoExpert Remote Monitoring Platforms
http://121.15.209.219:8010

iMars Grid-tied Solar Inverter

Option A
- Home
- Outdoors & Travel

Option B
- Home

Option C
- Outdoors & Travel

PC
Phone
Pad
Wireless Router
Internet

Run Alarm
Fault

iMars Series Grid-tied Solar Inverters Catalog
**Introduction**

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

**Features**

- Multi-level User Management
  - Administrator authority: change software settings and modify system configuration.
  - Guest authority: browse software settings and system parameters.

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

- Powerful Analysis Capabilities
  - Power output per day, week, month and year;
  - CO2 emission reductions, power generation profit;

**Software Function**

<table>
<thead>
<tr>
<th>iMars WinExpert</th>
<th>iMars PhoneExpert</th>
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<tbody>
<tr>
<td>The system generating capacity, economic benefits and environmental benefits</td>
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<td>View and print the system information</td>
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**Monitor Software**

**Solar System Design Software**

**Introduction**

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

**Features**

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

**Features**

- Multi-level User Management
  - Administrator authority: change software settings and modify system configuration.
  - Guest authority: browse software settings and system parameters.

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

- Powerful Analysis Capabilities
  - Power output per day, week, month and year;
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**Specification**

- **Serial Port**: RS485 Waterproof plug
- **WiFi 200 Transmission Distance**: 30m (no barrier)
- **ENET 200 Transmission Distance**: 100m
- **Wireless Protocol Standard**: 802.11 n/g/b
- **Operation Temperature**: 0°C~40°C
- **Working humidity**: 12%~90% RH (no condensation)
- **Storage Temperature**: -40°C~70°C
- **Store humidity**: 5%~90% RH (no condensation)
- **Size**: 139mmX31.7mmX21mm

**Product Description**

iMars WIFI200/ENET200 is an external wireless/wire communication device, which connects with solar inverter via RS485 interface to monitor inverter’s operation status and history. It is very easy to view the data with terminal display devices or monitoring software (iMars WinExpert for PC or iMars PhoneExpert for smart phone).

**iMars WIFI200 / ENET200 Communications Server**