Omega KSG TM String Inverter Series is the ideal solution for commercial usage, such as medium-size shopping mall. With the characteristics of dual independent input sections with three independent MPP trackers, wide MPPT tracking range, True three phase transformer-less design, IP65 harshest industrial protection level, convectional cooling system and various communication interfaces, such as RS232, RS485, WIFI & Ethernet, it forms Omega TM String Inverter an ideal solution for small and medium PV Power Station.

**Features**

**High Efficiency Output**
- Achieve Euro Efficiency up to 97.8%
- MPPT accuracy > 99.9%

**High Reliability**
- True three-phase bridge transformer-less topology for DC/AC output converter
- Three independent MPP tracking gains optimal energy harvesting.
- Low sensitivity to grid disturbances to avoid undesired disconnection from the grid

**High Flexibility**
- Wide range of input voltage and operation environment
- Multiple MPPT Channels
- IP65 Harshest Industrial Protection for indoors & outdoors.
- Wide DC input range from 200V up to 850V
- Wide operating temperature range -20 C/+60 C.

**User-friendly**
- RS232/RS485/WIFI interfaces
- Cable connection without tools
- Easily accessible connection area
- Easy-to-read LCD Display with all operational status and monitored data.

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**Omega KSG TM 10-30K Series**

KSG-10K | KSG-12.5K | KSG-15K
KSG-17K | KSG-20K | KSG-30K

www.kstarnewenergy.com
IP65 Protection

With highest industrial IP65 dust/water-proof protection, the Omega KSG TM string inverter series is for both indoor and outdoor applications.

The Omega KSG TM string inverter series can work in parallel by simply connecting via RS485 ports. The firmware of the inverter can be easily updated via a PC, enhance it dramatically reduces unnecessary un-installed and re-installed cost.

Omega KSG TM 10-30K Series
KSG-10K | KSG-12.5K | KSG-15K
KSG-17K | KSG-20K | KSG-30K

Mimic LCD display

The Dot Matrix LCD display with 128 x 64 pixels provides user-friendly menu control and delivers messages to manage, configure, control and diagnose the inverter directly. To simplify stock management, you may select the voltage/frequency required by the Grid of each country through the LCD display or the setting tool provided. Meanwhile, the display language can also be customized.
With the embedded DC input switch, it is required no external one when the PV strings are connected and disconnected; hence, it reduces overall system setup cost.

With optional Monitoring Software connecting via communication port, all operational status and electricity generated data can be monitored and stored in the computer.

<table>
<thead>
<tr>
<th>A</th>
<th>Connectors for DC Inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>DC input Switch</td>
</tr>
<tr>
<td>C</td>
<td>RS232 port</td>
</tr>
<tr>
<td>D</td>
<td>RS485</td>
</tr>
<tr>
<td>E</td>
<td>Connector for External WiFi or Ethernet</td>
</tr>
<tr>
<td>F</td>
<td>Connectors for AC Output</td>
</tr>
</tbody>
</table>

The Omega KSG TM string inverter series is a special type of inverter that converts direct current (solar) electricity into alternating current (AC) electricity and feeds it into an existing electrical grid.

**Omega KSG TM string inverter series is a grid tie inverter, which is designed for residential and commercial applications.**

If you’re looking for a way to save money on your power bill, increase the value of your farm or commercial place and reduce your carbon footprint without losing the security of the public power grid, then Omega KSG TM string inverter series is the ideal choice for you.
# Omega KSG TM Series Technical Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>KSG-10K</th>
<th>KSG-12.5K</th>
<th>KSG-15K</th>
<th>KSG-17K</th>
<th>KSG-20K</th>
<th>KSG-30K</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC Input</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Input Power</td>
<td>120W</td>
<td>140W</td>
<td>170W</td>
<td>190W</td>
<td>220W</td>
<td>330W</td>
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<tr>
<td>Rated Voltage</td>
<td>580V</td>
<td></td>
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<tr>
<td>Max. DC Voltage</td>
<td>900V</td>
<td>1000V</td>
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<tr>
<td>Operating Voltage Range</td>
<td>200V-850V</td>
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<td></td>
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<tr>
<td>Max. MPPT Voltage Range</td>
<td>250V-850V</td>
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</tr>
<tr>
<td>Number of MPP Tracker</td>
<td>3</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Strings per MPP Tracker</td>
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<td></td>
</tr>
<tr>
<td>Max. DC Power per MPP Tracker</td>
<td>5.5KW</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>DC Switch</td>
<td>Optional</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Input Current per MPP Tracker</td>
<td>12A/12A/12A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| AC Input    |         |           |         |         |         |         |
| Normal AC Power | 10.0KW | 12.5KW | 15.0KW | 17.0KW | 20.0KW | 30.0KW |
| Max. AC Power Output | 10.5KW | 13.0KW | 15.5KW | 17.5KW | 20.5KW | 30.5KW |
| Normal AC Voltage | 400Vac |     |     |     |     |     |
| AC Voltage Range | 400V±20% (adjustable) |     |     |     |     |     |
| Phase/Wire | 3 phases 4 wires + Ground |     |     |     |     |     |
| Output Frequency Range | 50/60Hz±5Hz (adjustable) |     |     |     |     |     |
| Max. Output Current | 17.0A | 20.0A | 24.0A | 27.0A | 30.0A | 48.0A |
| Rated Output Current/Max | 15.2A | 18.9A | 22.9A | 25.8A | 29.0A | 44.0A |
| Power Factor (cos φ) | 0.9 leading |     |     |     |     |     |
| Current THD (THDi) | <3% |     |     |     |     |     |
| AC connection | Three phase |     |     |     |     |     |
| Islanding Protection Detection | Active & Passive |     |     |     |     |     |
| System       |         |           |         |         |         |         |
| Topology     | Transformer less |     |     |     |     |     |
| Consumption (standby / night) | <10W / <2W |     |     |     |     |     |
| <15W / <2W |         |           |         |         |         |         |
| Efficiency   |         |           |         |         |         |         |
| Max. Efficiency | >98.0% | >98.0% | >98.1% | >98.1% | >98.2% | >98.2% |
| Euro Efficiency | >97.5% | >97.5% | >97.6% | >97.6% | >97.7% | >97.8% |
| MPPT Efficiency | 99.99% |     |     |     |     |     |
| Cooling concept | Forced Air Cooling |     |     |     |     |     |
| Protection   |         |           |         |         |         |         |
| DC reverse-polarity Protection | Yes |     |     |     |     |     |
| All-pole fault current monitoring unit | Yes |     |     |     |     |     |
| AC Short-circuit Protection | Yes |     |     |     |     |     |
| Ground fault monitoring | Yes |     |     |     |     |     |
| Environment  |         |           |         |         |         |         |
| Environmental Protection Degree | IP65 |     |     |     |     |     |
| Operating Temperature | -20 °C ~ +60 °C |     |     |     |     |     |
| Noise Emission | <60 dB (1 meter from surface) |     |     |     |     |     |
| Relative Humidity | 0 ~ 95% (non-condensing) |     |     |     |     |     |
| Altitude | <2000m without de-ratting |     |     |     |     |     |
| Communication Interface | R/S485 standard, external WiFi or Ethernet (optional) |     |     |     |     |     |
| Mechanical Characteristics | Dimension (WxDxH)mm | 500x500x210 | 522x690x210 | 600x800x250 |     |     |
| Overall Weight(kg) | 44 | 50 | 65 |     |     |     |

| Safety Conformance |         |           |         |         |         |         |
| Quality Assurance | ISO9001 |     |     |     |     |     |
| EMC Standard | EN51000-6-2, EN61000-6-3, EN61000-3-11, EN61000-3-12, etc |     |     |     |     |     |
| Safety | IEC/EN62109-1, IEC/EN62109-2, VDE0126-1-1, VDE AR N4105, GJB 59/EGG2012, AS3710/4777, CEI 0-21, etc |     |     |     |     |     |

Specifications subject to change without prior notice.