

## SOLAR

SOLAR GRID - TIE 25KW - 40KW - 5G STRING INVERTERS THREE PHASE

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**SG**Series

## **LEADING FEATURES**

- 3/4 MPPT design with precise algorithm, effectively reducing string mismatch.
- 8 strings intelligent monitoring
- Smart I-V Curve Diagnosis supported
- Fuse free design to avoid hazard
- Low start-up voltage & Ultra-wide MPPT range for more energy generation.
- 30% DC Overload, 13A input for each PV string
- THDi<3%, Low harmonic distortion
- Max. Efficiency 98.8%
- Leakage current repression technology
- Volt-Watt work mode integrated
- IP65 for outdoor Installation
- Type II surge arrester for both DC and AC side
- RS-485, Ethernet; Wi-Fi/GPRS/LAN monitoring interface
- Free remote monitoring on Web portal and Mobile App
- 5 Years standard Warranty, Extendable upto 20 Years.



## **SOLAR GRID-TIE STRING INVERTERS**

|  | TECHNIC   | CAL SPECIFICATIONS  |   |             |  |
|--|---|---|---|-------------|--|
| MODEL  | PSIT- 25K   | PSIT- 30K   | PSIT- 33K   | PSIT- 40K   |  |
| Rating   | 25 KW   | 30 KW   | 33 KW   | 40 KW       |  |
| INPUT DC   |   | I   |   |             |  |
| Max. DC Input Power (kW)   | 33  | 39  | 43  | 52          |  |
| Max. DC Input Voltage (V)  |   | 110   | 0   |             |  |
| Rated Voltage (V)  | 600   |   |   |             |  |
| Start-Up Voltage (V)   |   | 18  | 0   |             |  |
| MPPT Voltage Range (V)   | 200-1000  |   |   |             |  |
| Max. Input Current (A)   |   | 26+26+26  |   | 26+26+26+26 |  |
| Max. Short Circuit current for each MPPT (A)   |   | 40+40+40  |   | 40+40+40    |  |
| MPPT Number / No. of Strings per MPPT  |   |   |   |             |  |
| OUTPUT AC  |   | 3/2   |   | 4/2         |  |
| Rated Output Power (kW)  | 25  | 30  | 33  | 40          |  |
| Max. Apparent Output Power (kVA)   | 27.5  | 33  | 36.3  | 40          |  |
| Max. Output Power (kW)   | 27.5  | 33  | 36.3  | 44          |  |
| Rated Grid Voltage (V)   | 21.5  | 40  |   | ++          |  |
| ÷ ( )  | 313 - 470 (Adjustable)  |   |   |             |  |
| Grid Voltage Range (V)   |   |   |   |             |  |
| Rated Grid Frequency (Hz)  | 50/60   |   |   |             |  |
| Grid Frequency Range (Hz)  | 47-52 or 57-62<br>3/N/PE  |   |   |             |  |
| Operation Phase<br>Rated Grid Output Current (A)   | 36  | 3/N/<br>43.3  | PE 47.6   | 57.7        |  |
| Max.Output Current (A)   | 41.8  | 50.2  | 55.1  | 66.9        |  |
| Power Factor (at rated output power)   | 41.0  |   |   | 00.3        |  |
| THDi (at rated output power)   | 0.8 leading .1. 0.8 lagging   |   |   |             |  |
| DC Injection Current (mA)  | <0.5%In   |   |   |             |  |
| EFFICIENCY   |   | < 0.0   | /////   |             |  |
| Max. Efficiency  |   | 98.   | 8%  |             |  |
| EU Efficiency  | 98.3%   |   |   |             |  |
| MPPT Efficiency  | >99.5%  |   |   |             |  |
| PROTECTIONS  |   | -33   | .070  |             |  |
| Built-in Protections   | DC Reverse Polarity Protection, Short Circuit Protection, Output Over Current Protection, Output Over Voltage Protection, Insulation Resistance Monitoring, Residual Current Detection, Surge Protection through SPDs, DC side Type II/AC side Type II, Grid Monitoring, Islanding Protection, Temperature Protection |   |   |             |  |
| Integrated DC Switch   | Yes   |   |   |             |  |
| String Monitoring  |   | Yes   |   |             |  |
| Anti-PID   |   |   |   |             |  |
| GENERAL DATA   |   | Ye<br>Opti  |   |             |  |
| Dimension (max)  |   | Opti  | onal  |             |  |
| Dimension (mm)   |   | Opti<br>647W*62   | onal<br>9H*252D   |             |  |
| Weight (kg)  |   | Opti<br>647W*62<br>4  | onal<br>9H*252D<br>5  |             |  |
| Weight (kg)<br>Topology  |   | Opti<br>647W*62<br>4<br>Transfor  | onal<br>9H*252D<br>5<br>merless   |             |  |
| Weight (kg)<br>Topology<br>Self Consumption (watt)   |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N  | 9H*252D<br>5<br>merless<br>ight )   |             |  |
| Weight (kg)<br>Topology<br>Self Consumption (watt)<br>Operating Ambient Temperature Range  |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to  | 0nal<br>9H*252D<br>5<br>merless<br>ight )<br>60°C   |             |  |
| Weight (kg)<br>Topology<br>Self Consumption (watt)<br>Operating Ambient Temperature Range<br>Relative Humidity   |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10  | 00000000000000000000000000000000000000  |             |  |
| Weight (kg)<br>Topology<br>Self Consumption (watt)<br>Operating Ambient Temperature Range<br>Relative Humidity<br>Ingress Protection   |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10<br>IPt   | 0nal<br>9H*252D<br>5<br>merless<br>ight )<br>60°C<br>00%<br>55  |             |  |
| Weight (kg)<br>Topology<br>Self Consumption (watt)<br>Operating Ambient Temperature Range<br>Relative Humidity<br>Ingress Protection<br>Noise Emission {typical}   |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~11<br>IPt<br>< 30   | 00000000000000000000000000000000000000  |             |  |
| Weight (kg)   Topology   Self Consumption (watt)   Operating Ambient Temperature Range   Relative Humidity   Ingress Protection   Noise Emission {typical}   Cooling Concept   |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10<br>IP(<br>< 30<br>Natural C  | onal<br>9H*252D<br>5<br>merless<br>ight )<br>60°C<br>00%<br>35<br>dBA<br>onvection  |             |  |
| Weight (kg)   Topology   Self Consumption (watt)   Operating Ambient Temperature Range   Relative Humidity   Ingress Protection   Noise Emission {typical}   Cooling Concept   Max.Operation Altitude  |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10<br>1P0<br>< 30<br>Natural C<br>400   | onal<br>9H*252D<br>5<br>merless<br>ight )<br>60°C<br>00%<br>65<br>dBA<br>onvection<br>0m  |             |  |
| Weight (kg)   Topology   Self Consumption (watt)   Operating Ambient Temperature Range   Relative Humidity   Ingress Protection   Noise Emission {typical}   Cooling Concept   Max.Operation Altitude   Design Life  |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10<br>1P0<br>< 30<br>Natural C<br>400   | onal<br>9H*252D<br>5<br>merless<br>ight )<br>60°C<br>00%<br>35<br>dBA<br>onvection  |             |  |
| Weight (kg)   Topology   Self Consumption (watt)   Operating Ambient Temperature Range   Relative Humidity   Ingress Protection   Noise Emission {typical}   Cooling Concept   Max.Operation Altitude   Design Life   FEATURES   |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10<br>1P4<br>< 30<br>Natural C<br>400<br>> 20   | onal<br>9H*252D<br>5<br>merless<br>ight )<br>60°C<br>00%<br>655<br>dBA<br>convection<br>0m<br>Years   |             |  |
| Weight (kg)   Topology   Self Consumption (watt)   Operating Ambient Temperature Range   Relative Humidity   Ingress Protection   Noise Emission {typical}   Cooling Concept   Max.Operation Altitude   Design Life   FEATURES   DC Connection   |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10<br>1P4<br>< 30<br>Natural C<br>400<br>> 20   | onal<br>9H*252D<br>5<br>merless<br>ight )<br>60°C<br>00%<br>655<br>dBA<br>onvection<br>0m<br>Years<br>ateable   |             |  |
| Weight (kg)   Topology   Self Consumption (watt)   Operating Ambient Temperature Range   Relative Humidity   Ingress Protection   Noise Emission {typical}   Cooling Concept   Max.Operation Altitude   Design Life   FEATURES   DC Connection   AC Connection   |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10<br>IP0<br>< 30<br>Natural C<br>400<br>> 20<br>MC-4 M<br>Termina  | onal<br>9H*252D<br>5<br>merless<br>ight )<br>60°C<br>00%<br>65<br>dBA<br>onvection<br>0m<br>Years<br>ateable<br>il board  |             |  |
| Weight (kg)   Topology   Self Consumption (watt)   Operating Ambient Temperature Range   Relative Humidity   Ingress Protection   Noise Emission {typical}   Cooling Concept   Max.Operation Altitude   Design Life   FEATURES   DC Connection   AC Connection   Display   |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10<br>IP0<br>< 30<br>Natural C<br>400<br>> 20<br>MC-4 M<br>Termina<br>LCD, 2  | onal<br>9H*252D<br>5<br>merless<br>ight )<br>60°C<br>00%<br>65<br>dBA<br>onvection<br>0m<br>Years<br>ateable<br>il board<br>×20 Z   |             |  |
| Weight (kg)   Topology   Self Consumption (watt)   Operating Ambient Temperature Range   Relative Humidity   Ingress Protection   Noise Emission {typical}   Cooling Concept   Max.Operation Altitude   Design Life   FEATURES   DC Connection   AC Connection   Display   Communication Connections   |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10<br>IP0<br>< 30<br>Natural C<br>400<br>> 20<br>MC-4 M<br>Termina<br>LCD, 2<br>RS 485,   | onal<br>9H*252D<br>5<br>merless<br>ight )<br>60°C<br>00%<br>65<br>dBA<br>onvection<br>0m<br>Years<br>ateable<br>il board<br>i×20 Z<br>Ethernet  |             |  |
| Weight (kg)   Topology   Self Consumption (watt)   Operating Ambient Temperature Range   Relative Humidity   Ingress Protection   Noise Emission {typical}   Cooling Concept   Max.Operation Altitude   Design Life   FEATURES   DC Connection   AC Connection   Display   Communication Connections   Monitoring Interface  |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10<br>IP4<br>< 30<br>Natural C<br>400<br>> 20<br>MC-4 M<br>Termina<br>LCD, 2<br>RS 485,<br>WiFi / GP4   | 9H*252D     5     merless     ight )     60°C     00%     35     dBA     onvection     0m     Years     ateable     Il board     x×20 Z     Ethernet     RS / LAN   |             |  |
| Weight (kg)   Topology   Self Consumption (watt)   Operating Ambient Temperature Range   Relative Humidity   Ingress Protection   Noise Emission {typical}   Cooling Concept   Max.Operation Altitude   Design Life   FEATURES   DC Connection   AC Connection   Display   Communication Connections   Monitoring Interface   Warranty   |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10<br>IP0<br>< 30<br>Natural C<br>400<br>> 20<br>MC-4 M<br>Termina<br>LCD, 2<br>RS 485,   | 9H*252D     5     merless     ight )     60°C     00%     35     dBA     onvection     0m     Years     ateable     Il board     x×20 Z     Ethernet     RS / LAN   |             |  |
| Weight (kg)   Topology   Self Consumption (watt)   Operating Ambient Temperature Range   Relative Humidity   Ingress Protection   Noise Emission {typical}   Cooling Concept   Max.Operation Altitude   Design Life   FEATURES   DC Connection   AC Connection   Display   Communication Connections   Monitoring Interface   Warranty   IEC CERTIFICATES  |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10<br>IP0<br>< 30<br>Natural C<br>400<br>> 20<br>MC-4 M<br>Termina<br>LCD, 2<br>RS 485,<br>WiFi / GP1<br>5 Years Standard (External   | onal<br>9H*252D<br>5<br>merless<br>ight )<br>60°C<br>00%<br>55<br>dBA<br>onvection<br>0m<br>Years<br>ateable<br>il board<br>×20 Z<br>Ethernet<br>RS / LAN<br>endable upto 20 years)   |             |  |
| Weight (kg)   Topology   Self Consumption (watt)   Operating Ambient Temperature Range   Relative Humidity   Ingress Protection   Noise Emission {typical}   Cooling Concept   Max.Operation Altitude   Design Life   FEATURES   DC Connection   AC Connection   Display   Communication Connections   Monitoring Interface   Warranty   IEC CERTIFICATES   Grid Connection  |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10<br>IP0<br>< 30<br>Natural C<br>400<br>> 20<br>MC-4 M<br>Termina<br>LCD, 2<br>RS 485,<br>WiFi / GP1<br>5 Years Standard (Exte   | onal<br>9H*252D<br>5<br>merless<br>ight )<br>60°C<br>00%<br>65<br>dBA<br>onvection<br>0m<br>Years<br>ateable<br>il board<br>il board<br>il board<br>ix 20 Z<br>Ethernet<br>RS / LAN<br>endable upto 20 years)   |             |  |
| Weight (kg)   Topology   Self Consumption (watt)   Operating Ambient Temperature Range   Relative Humidity   Ingress Protection   Noise Emission {typical}   Cooling Concept   Max.Operation Altitude   Design Life   FEATURES   DC Connection   AC Connection   Display   Communication Connections   Monitoring Interface   Warranty   IEC CERTIFICATES   Grid Connection   Anti-Islanding Protection                                  |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10<br>IP4<br>< 30<br>Natural C<br>400<br>> 20<br>MC-4 M<br>Termina<br>LCD, 2<br>RS 485,<br>WiFi / GPI<br>5 Years Standard (Exte   | onal<br>9H*252D<br>5<br>merless<br>ight )<br>60°C<br>00%<br>55<br>dBA<br>onvection<br>0m<br>Years<br>ateable<br>Il board<br>x×20 Z<br>Ethernet<br>RS / LAN<br>endable upto 20 years)<br>51727<br>2116   |             |  |
| Weight (kg)   Topology   Self Consumption (watt)   Operating Ambient Temperature Range   Relative Humidity   Ingress Protection   Noise Emission {typical}   Cooling Concept   Max.Operation Altitude   Design Life   FEATURES   DC Connection   AC Connection   Display   Communication Connections   Monitoring Interface   Warranty   IEC CERTIFICATES   Grid Connection   Anti-Islanding Protection   Environmental Testing          |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10<br>IP0<br>< 30<br>Natural C<br>400<br>> 20<br>MC-4 M<br>Termina<br>LCD, 2<br>RS 485,<br>WiFi / GPI<br>5 Years Standard (Exte<br>IEC 6  | 9H*252D     5     merless     ight )     60°C     00%     35     dBA     onvection     0m     Years     ateable     Il board     x×20 Z     Ethernet     RS / LAN     andable upto 20 years)     31727     2116     2-14-27-30-64)                    |             |  |
| Weight (kg)   Topology   Self Consumption (watt)   Operating Ambient Temperature Range   Relative Humidity   Ingress Protection   Noise Emission {typical}   Cooling Concept   Max.Operation Altitude   Design Life   FEATURES   DC Connection   AC Connection   Display   Communication Connections   Monitoring Interface   Warranty   IEC CERTIFICATES   Grid Connection   Anti-Islanding Protection   Environmental Testing   Safety |   | Opti<br>647W*62<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~11<br>IP(<br><30<br>Natural C<br>400<br>> 20<br>MC-4 M<br>Termina<br>LCD, 2<br>RS 485,<br>WiFi / GPI<br>5 Years Standard (Exte<br>IEC 6<br>IEC 60068-2 (1-<br>IEC 62109-1, IEC 62109-2 | onal   9H*252D   5   merless   ight )   60°C   00%   35   dBA   ponvection   0m   Years   ateable   I board   x×20 Z   Ethernet   RS / LAN   endable upto 20 years)   11727   2116   2-14-27-30-64)   r, EN62109-1, EN62109-2                         |             |  |
| Weight (kg)   Topology   Self Consumption (watt)   Operating Ambient Temperature Range   Relative Humidity   Ingress Protection   Noise Emission {typical}   Cooling Concept   Max.Operation Altitude   Design Life   FEATURES   DC Connection   AC Connection   Display   Communication Connections   Monitoring Interface   Warranty   IEC CERTIFICATES   Grid Connection   Anti-Islanding Protection   Environmental Testing          |   | Opti<br>647W*62<br>4<br>Transfor<br>< 1 (N<br>-25 to<br>0~10<br>IP0<br>< 30<br>Natural C<br>400<br>> 20<br>MC-4 M<br>Termina<br>LCD, 2<br>RS 485,<br>WiFi / GPI<br>5 Years Standard (Exte<br>IEC 6  | onal   9H*252D   5   merless   ight )   60°C   00%   55   dBA   ponvection   0m   Years   ateable   il board   *×20 Z   Ethernet   RS / LAN   endable upto 20 years)   51727   2116   2-14-27-30-64)   e, EN62109-1, EN62109-2   EN 61000-6-1 (2-3-4) |             |  |

Note: Specifications are subject to change

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