

# Single Phase Hybrid Inverter

SUN-3.6/5/6/7/7.6/8K-SG05LP1-EU-SM2



Colorful touch LCD, IP65 protection degree



AC couple to retrofit existing solar system



Max. 16 pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel



Max. charging/discharging current of 190A



6 time periods for battery charging/discharging



Support storing energy from diesel generator

**Deye**

Stock Code: 605117.SH

| Model                                                  | SUN-3.6K-SG05<br>LP1-EU-SM2                                                                                                                                                                                                                                                                                                                                                                                                                                                      | SUN-5K-SG05<br>LP1-EU-SM2 | SUN-6K-SG05<br>LP1-EU-SM2 | SUN-7K-SG05<br>LP1-EU-SM2 | SUN-7.6K-SG05<br>LP1-EU-SM2 | SUN-8K-SG05<br>LP1-EU-SM2 |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|---------------------------|-----------------------------|---------------------------|
| Battery Input Data                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                           |                           |                           |                             |                           |
| Battery Type                                           | Lead-acid or Lithium-ion                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                           |                           |                           |                             |                           |
| Battery Voltage Range (V)                              | 40-60                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                           |                           |                           |                             |                           |
| Max. Charging Current (A)                              | 90                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 120                       | 135                       | 175                       | 190                         | 190                       |
| Max. Discharging Current (A)                           | 90                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 120                       | 135                       | 175                       | 190                         | 190                       |
| Charging Strategy for Li-ion Battery                   | Self-adaption to BMS                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                           |                           |                             |                           |
| Number of Battery Input                                | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                           |                           |                           |                             |                           |
| PV String Input Data                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                           |                           |                           |                             |                           |
| Max. PV Input Power (W)                                | 4680                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6500                      | 7800                      | 10000                     | 9880                        | 10400                     |
| Max. PV Input Voltage (V)                              | 500                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                           |                           |                             |                           |
| Start-up Voltage (V)                                   | 125                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                           |                           |                             |                           |
| MPPT Voltage Range (V)                                 | 150-425                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                           |                           |                           |                             |                           |
| Rated PV Input Voltage (V)                             | 370                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                           |                           |                             |                           |
| Max. Operating PV Input Current (A)                    | 18+18                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                           |                           | 26+26                     |                             |                           |
| Max. Input Short-Circuit Current (A)                   | 27+27                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                           |                           | 34+34                     |                             |                           |
| No. of MPP Trackers/<br>No. of Strings per MPP Tracker | 2/1+1                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                           |                           | 2/2+2                     |                             |                           |
| AC Input/Output Data                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                           |                           |                           |                             |                           |
| Rated AC Input/Output Active Power (W)                 | 3600                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5000                      | 6000                      | 7000                      | 7600                        | 8000                      |
| Max. AC Input/Output Apparent Power (VA)               | 3960                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5500                      | 6600                      | 7700                      | 8360                        | 8800                      |
| Rated AC Input/Output Current (A)                      | 16.4/15.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 22.8/21.8                 | 27.3/26.1                 | 31.9/30.5                 | 34.6/33.1                   | 36.4/34.8                 |
| Max. AC Input/Output Current (A)                       | 18/17.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 25/24                     | 30/28.7                   | 35/33.5                   | 38/36.4                     | 40/38.3                   |
| Max. Continuous AC Passthrough (grid to load) (A)      | 35                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           | 40                        | 50                        |                             |                           |
| Peak Power (off-grid) (W)                              | 2 times of rated power, 10s                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                           |                           |                           |                             |                           |
| Power Factor Adjustment Range                          | 0.8 leading to 0.8 lagging                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                           |                           |                           |                             |                           |
| Rated Input/Output Voltage/Range (V)                   | 220/230 0.85Un-1.1Un                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                           |                           |                             |                           |
| Rated Input/Output Grid Frequency/Range(Hz)            | 50/45-55, 60/55-65                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                           |                           |                             |                           |
| Grid Connection Form                                   | L+N+PE                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |                           |                           |                             |                           |
| Total Current Harmonic Distortion THDi                 | <3% (of nominal power)                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |                           |                           |                             |                           |
| DC Injection Current                                   | <0.5% In                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                           |                           |                           |                             |                           |
| Efficiency                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                           |                           |                           |                             |                           |
| Max. Efficiency                                        | 97.6%                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                           |                           |                           |                             |                           |
| Euro Efficiency                                        | 96.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                           |                           |                           |                             |                           |
| MPPT Efficiency                                        | >99%                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                           |                           |                             |                           |
| Equipment Protection                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                           |                           |                           |                             |                           |
| Integrated                                             | DC Polarity Reverse Connection Protection, AC Output Overcurrent Protection<br>AC Output Overvoltage Protection, AC Output Short Circuit Protection, Thermal Protection<br>DC Terminal Insulation Impedance Monitoring, DC Component Monitoring, Ground Fault Current Monitoring<br>Power Network Monitoring, Island Protection Monitoring, Earth Fault Detection, DC Input Switch<br>Overvoltage Load Drop Protection, Residual Current (RCD) Detection, Surge protection level |                           |                           |                           |                             |                           |
| Surge Protection Level                                 | TYPE II(DC), TYPE II(AC)                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                           |                           |                           |                             |                           |
| Interface                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                           |                           |                           |                             |                           |
| Communication Interface                                | RS485/RS232/CAN                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                           |                           |                           |                             |                           |
| Monitor Mode                                           | GPRS/WIFI/Bluetooth/4G/LAN(optional)                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                           |                           |                             |                           |
| General Data                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                           |                           |                           |                             |                           |
| Operating Temperature Range ( )                        | -40 to +60°C, >45°C Derating                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                           |                           |                           |                             |                           |
| Permissible Ambient Humidity                           | 0-100%                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |                           |                           |                             |                           |
| Permissible Altitude                                   | 2000m                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                           |                           |                           |                             |                           |
| Noise (dB)                                             | <30                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                           |                           |                             |                           |
| Ingress Protection(IP) Rating                          | IP 65                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                           |                           |                           |                             |                           |
| Inverter Topology                                      | Non-Isolated                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                           |                           |                           |                             |                           |
| Over Voltage Category                                  | OVC II(DC), OVC III(AC)                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                           |                           |                           |                             |                           |
| Cabinet Size (WxHxD mm)                                | 366×589.5×237 (Excluding Connectors and Brackets)                                                                                                                                                                                                                                                                                                                                                                                                                                |                           |                           |                           |                             |                           |
| Weight (kg)                                            | 26.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                           |                           |                             |                           |
| Type of Cooling                                        | Intelligent Air Cooling                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                           |                           |                           |                             |                           |
| Warranty                                               | 5 Years/10 Years<br>the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy                                                                                                                                                                                                                                                                                                                                               |                           |                           |                           |                             |                           |
| Grid Regulation                                        | IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002,<br>OVE-Richtlinie R25, G99, VDE-AR-N 4105                                                                                                                                                                                                                                                                                                                                                                 |                           |                           |                           |                             |                           |
| Safety / EMC Standard                                  | IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |                           |                           |                             |                           |