

# Three Phase Hybrid Inverter

SUN-8/10/12K-SG05LP3-EU-SM2



- 100** 100% unbalanced output, each phase; Max. output up to 50% rated power
-  AC couple to retrofit existing solar system
- 10** Max. 10 pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
- 240** Max. charging/discharging current of 240A
- 48** 48V low voltage battery, transformer isolation design
- 6** 6 time periods for battery charging/discharging
-  Support storing energy from diesel generator

**Deye**

Stock Code: 605117.SH

| Model                                                  | SUN-8K-SG05<br>LP3-EU-SM2                                                                                                                                                                                                                                                                                                                                                                                                                                                        | SUN-10K-SG05<br>LP3-EU-SM2 | SUN-12K-SG05<br>LP3-EU-SM2 |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------|
| Battery Input Data                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                            |                            |
| Battery Type                                           | Lead-acid or Lithium-ion                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            |                            |
| Battery Voltage Range (V)                              | 40-60                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            |                            |
| Max. Charging Current (A)                              | 190                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 210                        | 240                        |
| Max. Discharging Current (A)                           | 190                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 210                        | 240                        |
| Charging Strategy for Li-ion Battery                   | Self-adaption to BMS                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                            |
| Number of Battery Input                                | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                            |                            |
| PV String Input Data                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                            |                            |
| Max. PV Input Power (W)                                | 12000                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 15000                      | 18000                      |
| Max. PV Input Voltage (V)                              | 800                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                            |                            |
| Start-up Voltage (V)                                   | 160                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                            |                            |
| MPPT Voltage Range (V)                                 | 200-650                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                            |                            |
| Rated PV Input Voltage (V)                             | 550                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                            |                            |
| Max. Operating PV Input Current (A)                    | 20+20                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            |                            |
| Max. Input Short-Circuit Current (A)                   | 30+30                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            |                            |
| No. of MPP Trackers/<br>No. of Strings per MPP Tracker | 2/1+1                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            |                            |
| AC Input/Output Data                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                            |                            |
| Rated AC Input/Output Active Power (W)                 | 8000                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 10000                      | 12000                      |
| Max. AC Input/Output Apparent Power (VA)               | 8800                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 11000                      | 13200                      |
| Rated AC Input/Output Current (A)                      | 12.2/11.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 15.2/14.5                  | 18.2/17.4                  |
| Max. AC Input/Output Current (A)                       | 13.4/12.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 16.7/16                    | 20/19.2                    |
| Max. Three-phase Unbalanced Output Current (A)         | 18.2/17.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 22.8/21.8                  | 27.3/26.1                  |
| Max. Continuous AC Passthrough (grid to load) (A)      | 45                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                            |                            |
| 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)                   | 220/380V, 230/400V 0.85Un-1.1Un                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                            |                            |
| Rated Input/Output Grid Frequency/Range(Hz)            | 50/45-55, 60/55-65                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                            |                            |
| Grid Connection Form                                   | 3L+N+PE                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                            |                            |
| Total Current Harmonic Distortion THDi                 | <3% (of nominal power)                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                            |                            |
| DC Injection Current                                   | <0.5% In                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            |                            |
| Efficiency                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                            |                            |
| Max. Efficiency                                        | 97.6%                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            |                            |
| Euro Efficiency                                        | 97.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            |                            |
| 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                                   | 3000m                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            |                            |
| Noise (dB)                                             | ≤55                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                            |                            |
| Ingress Protection(IP) Rating                          | IP 65                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            |                            |
| Inverter Topology                                      | Non-Isolated                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                            |                            |
| Over Voltage Category                                  | OVC II(DC), OVC III(AC)                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                            |                            |
| Cabinet Size (WxHxD mm)                                | 386×660×253 (Excluding Connectors and Brackets)                                                                                                                                                                                                                                                                                                                                                                                                                                  |                            |                            |
| Weight (kg)                                            | 35.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                            |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                           |                            |                            |