

# Three Phase Hybrid Inverter

SUN-15/20/25K -SG02HP3-EU-DM3



## Efficient

- High voltage battery, higher efficiency



## Intelligent

- 6 time periods for battery charging/discharging



## Flexible

- AC couple to retrofit existing solar system
- Max. 10 pcs parallel for on-grid and off-grid operation; support multiple batteries parallel



## Reliable

- Max. charging/discharging current of 55A
- Support storing energy from diesel generator
  - 100% unbalanced output

| Model                                              | SUN-15K-SG02HP3-EU-DM3                                                                                                                                                                                                                                                                                                                 |           | SUN-20K-SG02HP3-EU-DM3 |  | SUN-25K-SG02HP3-EU-DM3 |  |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------|--|------------------------|--|
| Battery Input Data                                 |                                                                                                                                                                                                                                                                                                                                        |           |                        |  |                        |  |
| Battery Type                                       | Lithium-ion                                                                                                                                                                                                                                                                                                                            |           |                        |  |                        |  |
| Battery Voltage Range (V)                          | 160-700                                                                                                                                                                                                                                                                                                                                |           |                        |  |                        |  |
| Max. Charging/Discharging Current (A)              | 55                                                                                                                                                                                                                                                                                                                                     |           |                        |  |                        |  |
| Charging Strategy for Li-ion Battery               | Self-adaption to BMS                                                                                                                                                                                                                                                                                                                   |           |                        |  |                        |  |
| Number of Battery Input                            | 1                                                                                                                                                                                                                                                                                                                                      |           |                        |  |                        |  |
| PV String Input Data                               |                                                                                                                                                                                                                                                                                                                                        |           |                        |  |                        |  |
| Max. PV access power (W)                           | 30000                                                                                                                                                                                                                                                                                                                                  | 40000     | 50000                  |  |                        |  |
| Max. PV Input Power (W)                            | 24000                                                                                                                                                                                                                                                                                                                                  | 32000     | 40000                  |  |                        |  |
| Max. PV Input Voltage (V)                          | 1000                                                                                                                                                                                                                                                                                                                                   |           |                        |  |                        |  |
| Start-up Voltage (V)                               | 180                                                                                                                                                                                                                                                                                                                                    |           |                        |  |                        |  |
| MPPT Voltage Range (V)                             | 150-850                                                                                                                                                                                                                                                                                                                                |           |                        |  |                        |  |
| Rated PV Input Voltage (V)                         | 600                                                                                                                                                                                                                                                                                                                                    |           |                        |  |                        |  |
| Max. Operating PV Input Current (A)                | 36+20+20                                                                                                                                                                                                                                                                                                                               |           |                        |  |                        |  |
| Max. Input Short-Circuit Current (A)               | 54+30+30                                                                                                                                                                                                                                                                                                                               |           |                        |  |                        |  |
| No. of MPP Trackers/<br>No. of Strings MPP Tracker | 3/2+1+1                                                                                                                                                                                                                                                                                                                                |           |                        |  |                        |  |
| AC Input/Output Data                               |                                                                                                                                                                                                                                                                                                                                        |           |                        |  |                        |  |
| Rated AC Input/Output Active Power (W)             | 15000                                                                                                                                                                                                                                                                                                                                  | 20000     | 25000                  |  |                        |  |
| Max. AC Input/Output Apparent Power (VA)           | 16500                                                                                                                                                                                                                                                                                                                                  | 22000     | 27500                  |  |                        |  |
| Rated AC Input/Output Current (A)                  | 22.8/21.8                                                                                                                                                                                                                                                                                                                              | 30.4/29.0 | 37.9/36.3              |  |                        |  |
| Max. AC Input/Output Current (A)                   | 25/24                                                                                                                                                                                                                                                                                                                                  | 33.4/31.9 | 41.7/39.9              |  |                        |  |
| Max. Continuous AC Passthrough (grid to load) (A)  | 60                                                                                                                                                                                                                                                                                                                                     |           |                        |  |                        |  |
| Peak Power (off-grid) (W)                          | 1.5 times of rated power, 10s                                                                                                                                                                                                                                                                                                          |           |                        |  |                        |  |
| Power Factor Adjustment Range                      | 0.8 leading to 0.8 lagging                                                                                                                                                                                                                                                                                                             |           |                        |  |                        |  |
| Rated input/output voltage                         | 220/380V,230/400V 0.85Un-1.1Un 3L+N+PE                                                                                                                                                                                                                                                                                                 |           |                        |  |                        |  |
| Rated Input/Output Grid Frequency/Range(Hz)        | 50/45-55, 60/55-65                                                                                                                                                                                                                                                                                                                     |           |                        |  |                        |  |
| 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 Reverse Polarity Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Arc Fault Circuit Interrupter (AFCI) (optional), Anti-islanding Protection, DC Switch, Insulation Impedance Detection, Residual Current Detection |           |                        |  |                        |  |
| Surge Protection Level                             | TYPE II(DC), TYPE II(AC)                                                                                                                                                                                                                                                                                                               |           |                        |  |                        |  |
| Interface                                          |                                                                                                                                                                                                                                                                                                                                        |           |                        |  |                        |  |
| LCD/LED Display                                    | LCD+LED                                                                                                                                                                                                                                                                                                                                |           |                        |  |                        |  |
| Communication Interface                            | WIFI, RS485, CAN                                                                                                                                                                                                                                                                                                                       |           |                        |  |                        |  |
| Monitor Mode                                       | GPRS/WIFI/Bluetooth/4G                                                                                                                                                                                                                                                                                                                 |           |                        |  |                        |  |
| General Data                                       |                                                                                                                                                                                                                                                                                                                                        |           |                        |  |                        |  |
| Operating Temperature Range (°C)                   | -40 to +60°C, >45°C Derating                                                                                                                                                                                                                                                                                                           |           |                        |  |                        |  |
| Permissible Ambient Humidity                       | 0-100%                                                                                                                                                                                                                                                                                                                                 |           |                        |  |                        |  |
| Permissible Altitude                               | 3000m                                                                                                                                                                                                                                                                                                                                  |           |                        |  |                        |  |
| Noise (dB)                                         | ≤45                                                                                                                                                                                                                                                                                                                                    |           |                        |  |                        |  |
| Ingress Protection(IP) Rating                      | IP 65                                                                                                                                                                                                                                                                                                                                  |           |                        |  |                        |  |
| Inverter Topology                                  | Non-Isolated                                                                                                                                                                                                                                                                                                                           |           |                        |  |                        |  |
| Over Voltage Category                              | OVC II(DC), OVC III(AC)                                                                                                                                                                                                                                                                                                                |           |                        |  |                        |  |
| Type of Cooling                                    | Intelligent Air Cooling                                                                                                                                                                                                                                                                                                                |           |                        |  |                        |  |
| Warranty                                           | 5 Years / Up to 10 Years*<br>*Warranty period varies by installation country. Refer to the Warranty Policy for details.                                                                                                                                                                                                                |           |                        |  |                        |  |
| Grid Regulation                                    | IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, 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                                                                                                                                                                                                                                                                                 |           |                        |  |                        |  |