

## ECO HYBRID

# SNA-EU 12-14K (Single-Phase)

- 2 MPPTs with 4 strings, Max. 24kW PV input
- Max. charging and discharging current: 250A
- Off-grid application for high demand with 12kW output power
- Dual AC output ports for multiple load connections
- Integrated Design with Load and Battery Breaker
- PV or AC or Generator wake up battery
- Supports up to 16 units in parallel
- Separate Gen Port for
  - Auto start-stop
  - Working with the existing grid-tied system
  - Smart load management



| Model                                            | SNA-EU 12000                                        |                                | SNA-EU 14000 |
|--------------------------------------------------|-----------------------------------------------------|--------------------------------|--------------|
| Input (PV DC)                                    |                                                     |                                |              |
| Max. PV input power (W)                          | 24000 (12000 / 12000)                               |                                |              |
| Rated PV input voltage (V)                       | 320                                                 |                                |              |
| Number of independent MPPT inputs                | 2 / (2:2)                                           |                                |              |
| Max. PV input voltage (V)                        | 480                                                 |                                |              |
| MPPT voltage range (V)                           | 120 ~ 440                                           |                                |              |
| Start-up voltage (V)                             | 100                                                 |                                |              |
| Max. PV input current per MPPT (A)               | 35 / 35                                             |                                |              |
| Max. PV short-circuit current input per MPPT (A) | 44 / 44                                             |                                |              |
| Battery                                          |                                                     |                                |              |
| Compatible battery type                          | Lithium-ion / Lead-Acid                             |                                |              |
| Rated battery voltage (V)                        | 48 / 51.2                                           |                                |              |
| Battery voltage range (V)                        | 46.4 ~ 60 / 38.4 ~ 60                               |                                |              |
| Max. charging / discharging current (A)          | 250                                                 | 270                            |              |
| Max. charging / discharging power (W)            | 12000                                               | 13000                          |              |
| Force wake up battery from PV and Grid function  | YES                                                 |                                |              |
| Grid                                             |                                                     |                                |              |
| Rated AC voltage (V)                             | 230                                                 |                                |              |
| AC Start-up Voltage                              | 90                                                  |                                |              |
| Acceptable Input Voltage Range (V)               | 130 ~ 280                                           |                                |              |
| Rated AC frequency (Hz)                          | 50 / 600                                            |                                |              |
| Rated AC input current (A)                       | 100                                                 |                                |              |
| Rated AC input power (W)                         | 24000                                               |                                |              |
| PF                                               | 0.99                                                |                                |              |
| THDI                                             | < 5%                                                |                                |              |
| Max. continuous AC passthrough current (A)       | 100                                                 |                                |              |
| GEN                                              |                                                     |                                |              |
| Rated GEN voltage (V)                            | 230                                                 |                                |              |
| Rated GEN frequency (Hz)                         | 50 / 60                                             |                                |              |
| Rated GEN input current (A)                      | 65                                                  |                                |              |
| Rated GEN input power (W)                        | 15000                                               |                                |              |
| UPS                                              |                                                     |                                |              |
| Rated output power (W)                           | 12000                                               | 14000@230V (with PV + Battery) |              |
| Rated output voltage (V)                         | 230                                                 |                                |              |
| Rated output current (A)                         | 53                                                  | 61                             |              |
| Rated output frequency (Hz)                      | 50 / 60                                             |                                |              |
| Switching time ( UPS )                           | < 10 ms                                             |                                |              |
| Wave form                                        | Sine wave                                           |                                |              |
| THDV                                             | < 3%                                                |                                |              |
| Overload protection                              | 5s@≥1.5 × rated power / 10s@(1.1~1.5) × rated power |                                |              |
| Efficiency                                       |                                                     |                                |              |
| Max. MPPT efficiency                             | 99.0%                                               |                                |              |
| Max. efficiency                                  | 93.5%                                               |                                |              |
| Max. charge / discharge efficiency               | 93.0%                                               |                                |              |
| Protection                                       |                                                     |                                |              |
| PV reverse polarity protection (Y/N)             | YES                                                 |                                |              |
| Over current / voltage protection (Y/N)          | YES                                                 |                                |              |
| AC Short-circuit current protection (Y/N)        | YES                                                 |                                |              |
| Grid monitoring (Y/N)                            | YES                                                 |                                |              |
| DC switch (Y/N)                                  | YES                                                 |                                |              |
| DC / AC Surge protection                         | Type III                                            |                                |              |
| Battery reverse polarity protection (Y/N)        | Yes                                                 |                                |              |
| General                                          |                                                     |                                |              |
| Dimensions ( W × H × D )                         | 530 × 830 × 150 mm / 17.72 × 25.59 × 5.9 in         |                                |              |
| Weight                                           | 43.5 kg / 95.9 lbs                                  |                                |              |
| Ingress protection rating                        | IP20                                                |                                |              |
| Operating environment temperature range (°C)     | 0 ~ 45                                              |                                |              |
| Storage temperature range (°C)                   | -15 ~ 60                                            |                                |              |
| Relative humidity                                | 5% ~ 95%                                            |                                |              |
| Display & Communication interface                | LCD + RGB, RS485 / Wifi / CAN                       |                                |              |
| Warranty                                         | 2 years                                             |                                |              |
| Cooling method                                   | Smart cooling                                       |                                |              |
| Topology on AC / Battery side                    | Transformer-less / Transformer                      |                                |              |
| Max. Operating Altitude (m)                      | 2000                                                |                                |              |
| Noise emission (dB)                              | 55                                                  |                                |              |
| Standard & Certification                         |                                                     |                                |              |