

# THREE PHASE HYBRID INVERTER

SUNIN-12KM2-L1P3-EU

## MAIN FEATURES

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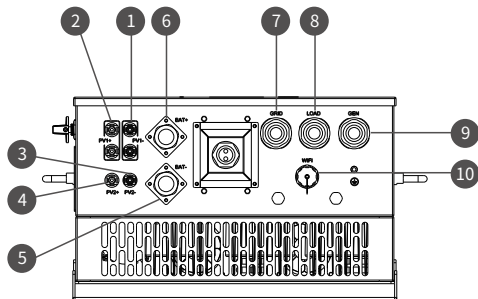
48V low voltage battery, transformer isolation design



## CERTIFICATIONS

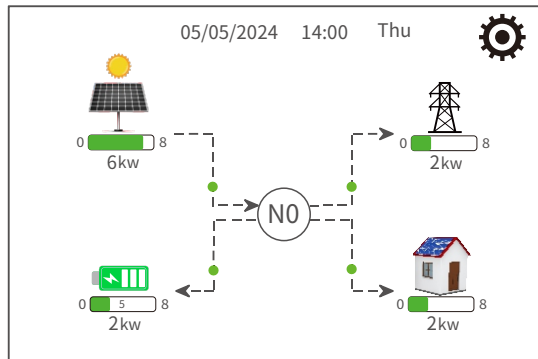


## PRODUCT CHARACTERISTICS

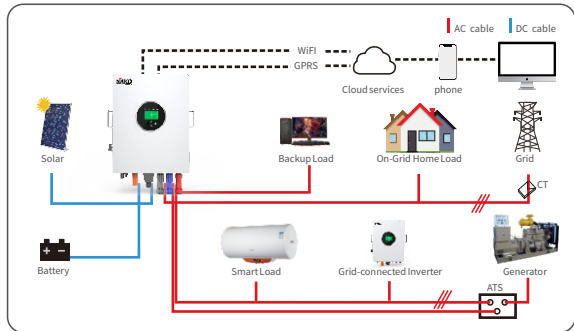


- 1: PV1- 3: PV2- 5: BAT- 7: GRID 9: GEN  
2: Pv1+ 4: Pv2+ 6: BAT+ 8: LOAD 10: WiFi

## LCD DISPLAY ICONS



## BASIC SYSTEM ARCHITECTURE



# Residential Energy Storage Hybrid Inverter



## TECHNICAL PARAMETER

| Model                                       | SUNIN-12KM2-L1P3-EU                                   |
|---------------------------------------------|-------------------------------------------------------|
| <b>PV String Input Data</b>                 |                                                       |
| Max. DC Input Power                         | 15600W                                                |
| Rated PV Input Voltage                      | 550V                                                  |
| Start-up Voltage                            | 160V                                                  |
| MPPT Voltage Range                          | 200V~650V                                             |
| Full Load MPPT Voltage Range                | 350V~650V                                             |
| Max. PV Input Current                       | 26A+13A                                               |
| Max. PV Short Circuit Current               | 34A+17A                                               |
| No. of MPPT Trackers                        | 2                                                     |
| No. of Strings per MPPT Tracker             | 2+1                                                   |
| <b>AC Input/Output Data</b>                 |                                                       |
| Rated AC Output Power                       | 12000W                                                |
| Max. AC Output Power                        | 13200W                                                |
| AC Input/Output Rated Current               | 18.2A/17.4A                                           |
| Max. AC Input/Output Current                | 20.0A/19.1A                                           |
| Max.Three-phase Unbalanced Output Current   | 27.3A/26.1A                                           |
| Max. Output Short Circuit Current           | 75A                                                   |
| Max. Continuous AC Passthrough              | 45A                                                   |
| Peak Power(off grid)                        | 2 times of rated power, 10s                           |
| Power Factor                                | 0.8 leading to 0.8 lagging                            |
| AC Output Frequency and Voltage             | 50/60Hz , 3L/N/PE 220/380Vac , 230/400Vac             |
| Grid Type                                   | Three phase                                           |
| Total Harmonic Distortion                   | <3% (of nominal power)                                |
| DC Current Injection                        | <0.5% In                                              |
| <b>Battery Input Data</b>                   |                                                       |
| Battery Type                                | Lead acid or Li-Ion                                   |
| Battery Voltage Range                       | 40~60Vdc                                              |
| Max. Charging Current                       | 240A                                                  |
| Max. Discharging Current                    | 240A                                                  |
| External Temperature Sensor                 | Yes                                                   |
| Charhing Curve                              | 3 Stages / Equalization                               |
| Charging Strategy for Li-Ion Battery        | Self-adaption to BMS                                  |
| <b>Efficiency</b>                           |                                                       |
| Max. Efficiency                             | 97.60%                                                |
| Euro Efficiency                             | 96.50%                                                |
| MPPT Efficiency                             | >99%                                                  |
| <b>Protection</b>                           |                                                       |
| PV Arc Fault Detection                      | Integrated                                            |
| PV Input Lightning Protection               | Integrated                                            |
| Anti-islanding Protection                   | Integrated                                            |
| PV String Input Reverse Polarity Protection | Integrated                                            |
| Insulation Resistor Detection               | Integrated                                            |
| Residual Current Monitoring Unit            | Integrated                                            |
| Output Over Current Protection              | Integrated                                            |
| Over Voltage Category                       | Integrated                                            |
| Surge Protection                            | DC Type II / AC Type II                               |
| Over Voltage Category                       | DC Type II / AC Type III                              |
| <b>Certifications and Standards</b>         |                                                       |
| Grid Regulation                             | IEC61727/62116 , EN50549-1                            |
| Safety EMC / Standard                       | IEC/EN61000-6-1/2/3/4 , IEC/EN62109-1 , IEC/EN62109-2 |
| <b>General Data</b>                         |                                                       |
| Operating Temperature Range(°C)             | -40°C~+60°C , >45°C derating                          |
| Cooling                                     | Smart cooling                                         |
| Noise(dB)                                   | <50dB (1 meter)                                       |
| Communication with BMS                      | RS485 , CAN                                           |
| Monitoring mode                             | WiFi + APP                                            |
| Weight(NW Kg)                               | 34Kg                                                  |
| Product Size(WxHxDmm)                       | 576*446*255mm                                         |
| Protection Degree                           | IP65                                                  |
| Installation Style                          | Wall-mounted                                          |
| Warranty                                    | 5 Years (10 Years Optional)                           |

