

# Hybrid 5kWh Solar System

## Fully set include:

### Solar Panel:

620W\*6pcs



### Inverter:

6.2kW Hybrid\*1pc



### Battery:

51.2V 100AH\*1pc  
(LifePo4 Battery)



### Solar Panel Rack:

Roof Type



### Cables:

International standard  
1\*4mm<sup>2</sup> series  
red and black



### WIFI Module (optional):

Monitor, troubleshoot,  
or communication\*1pcs



### MC4:



### PV Combiner Box:

1pc



CSA Solar · 5.12 kWh Hybrid Solar System

Detailed Spec Sheet

Spec 1 of 3 · 5.12 kWh LiFePO4 battery (25.6 V / 200 Ah, 24 V system) specifications

| 1 Battery · LiFePO4 Energy Storage (24 V System) |                                                    | CSA in-house made · 25.6 V / 200 Ah module |
|--------------------------------------------------|----------------------------------------------------|--------------------------------------------|
| ENERGY & CAPACITY                                |                                                    |                                            |
| Usable energy                                    | 5.12 kWh                                           |                                            |
| Nominal voltage                                  | 51.2 V (8S LiFePO4)                                |                                            |
| Nominal capacity                                 | 100 Ah                                             |                                            |
| Operating voltage range                          | 44.84– 58.4V                                       |                                            |
| Cell technology                                  | LiFePO <sub>4</sub> (LFP)                          |                                            |
| CHARGE / DISCHARGE LIMITS                        |                                                    |                                            |
| Max charge current (battery-side cap)            | 100 A · 2.56 kW                                    |                                            |
| Max discharge current                            | 100 A (0.5C continuous)                            |                                            |
| OPERATING CONDITIONS                             |                                                    |                                            |
| Charge temperature                               | 0 – 45 °C                                          |                                            |
| Discharge temperature                            | -20 – 60 °C                                        |                                            |
| Humidity                                         | ≤ 95 % RH (no condensation)                        |                                            |
| IP rating                                        | IP20 (indoor)                                      |                                            |
| MECHANICAL & LIFECYCLE                           |                                                    |                                            |
| Dimensions (W×H×D)                               | Refer to factory datasheet                         |                                            |
| Cycle life                                       | 6,000 cycles @ 80 % DoD                            |                                            |
| Scalability                                      | Multiple units in parallel                         |                                            |
| INTERFACE & COMPLIANCE                           |                                                    |                                            |
| Communication                                    | CAN / RS485                                        |                                            |
| Display                                          | SOC LED indicator + LCD display                    |                                            |
| Compatible inverters                             | 48 V system inverters (Haishang, Victron, etc.)    |                                            |
| Compliance                                       | UN38.3 / IEC 62619 / IEC 61000                     |                                            |
| Application                                      | Off-grid / Backup / On-grid (with hybrid inverter) |                                            |
| Warranty                                         | 5 years (standard)                                 |                                            |

**Note** · The 25.6 V / 200 Ah battery is the 24 V system version matching the cover configuration (25.6 V, 200 A LifePo4 battery). Final mechanical dimensions and current ratings to be confirmed against the factory datasheet.

| 2 Inverter · 6.2 kW Single-Phase Hybrid |                                         | Model: HE300-7200-FP-I5 |
|-----------------------------------------|-----------------------------------------|-------------------------|
| AC OUTPUT                               |                                         |                         |
| AC rated output power                   | 6200 W                                  |                         |
| Nominal AC voltage                      | 240 VAC ± 5 % (single phase)            |                         |
| Nominal AC frequency                    | 50 / 60 Hz                              |                         |
| Nominal AC output current               | 28.2 A                                  |                         |
| Output waveform                         | Pure sine wave                          |                         |
| Phase                                   | 1                                       |                         |
| BATTERY INTERFACE (DC)                  |                                         |                         |
| Battery rated voltage                   | 48 V (51.2 V LFP compatible)            |                         |
| Battery type                            | Lead-acid / Lithium                     |                         |
| Battery charge / discharge current      | 120 A                                   |                         |
| Charging method                         | Two-way / three-way / automatic setting |                         |
| PV INPUT (DC)                           |                                         |                         |
| Maximum PV input power                  | 8500 W                                  |                         |
| MPPT voltage range                      | 60 – 450 V                              |                         |
| Max PV open-circuit voltage             | 500 V                                   |                         |
| Max PV DC input current                 | 27 A                                    |                         |
| MPPT trackers                           | 1                                       |                         |
| MECHANICAL & ENVIRONMENTAL              |                                         |                         |
| Cooling                                 | Intelligent air cooling                 |                         |
| Operating temperature                   | -10 – 60 °C                             |                         |
| IP rating                               | IP21 (indoor)                           |                         |
| Dimensions (W×H×D)                      | 420 × 315 × 120 mm                      |                         |
| Net / gross weight                      | 9.7 kg / 11.2 kg                        |                         |
| Packaging size                          | 495 × 405 × 220 mm                      |                         |
| GENERAL                                 |                                         |                         |
| Working mode                            | Hyrbid                                  |                         |
| Output Topology                         | L+N+PE                                  |                         |

|                                                              |                                                              |                                                       |  |
|--------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------|--|
| 3 PV Module · 620 W N-type Bifacial                          |                                                              | Model: LNDT-620ND · LUXEN SOLAR · LUXPOWER® Series N5 |  |
| STC ELECTRICAL PERFORMANCE (1000 W/M², 25 °C)                |                                                              |                                                       |  |
| Maximum power (Pmax)                                         | 620 W                                                        |                                                       |  |
| Module efficiency                                            | 22.95 %                                                      |                                                       |  |
| Voltage at Pmax (Vmpp)                                       | 41.33 V                                                      |                                                       |  |
| Current at Pmax (Impp)                                       | 15.00 A                                                      |                                                       |  |
| Open-circuit voltage (Voc)                                   | 49.32 V                                                      |                                                       |  |
| Short-circuit current (Isc)                                  | 15.92 A                                                      |                                                       |  |
| Power tolerance                                              | 0 / +5 W                                                     |                                                       |  |
| NMOT (NOCT) CONDITIONS · 800 W/M², 20 °C, AM 1.5, 1 M/S WIND |                                                              |                                                       |  |
| NMOT maximum power (Pmax)                                    | 466.0 W                                                      |                                                       |  |
| NMOT Vmpp / Voc                                              | 38.83 V / 46.33 V                                            |                                                       |  |
| NMOT Impp / Isc                                              | 12.00 A / 12.74 A                                            |                                                       |  |
| Nominal operating temperature                                | 45 ± 2 °C                                                    |                                                       |  |
| BIFACIAL GAIN (REAR-SIDE)                                    |                                                              |                                                       |  |
| +5 % rear gain / Pmax                                        | 23.32 % / 651 W                                              |                                                       |  |
| +15 % rear gain / Pmax                                       | 26.40 % / 713 W                                              |                                                       |  |
| +25 % rear gain / Pmax                                       | 28.69 % / 775 W                                              |                                                       |  |
| MECHANICAL & ENVIRONMENTAL                                   |                                                              |                                                       |  |
| Cell technology                                              | N-type Mono (LECO / SMBB) · 132 cells (6 × 22)               |                                                       |  |
| Dimensions (L × W × H)                                       | 2382 × 1134 × 30 mm                                          |                                                       |  |
| Weight                                                       | 33.5 kg                                                      |                                                       |  |
| Front / rear static load                                     | 5400 Pa / 2400 Pa                                            |                                                       |  |
| Junction box                                                 | IP68 · 3 bypass diodes · MC4 compatible                      |                                                       |  |
| Max system voltage                                           | 1500 V DC (IEC)                                              |                                                       |  |
| Max series fuse rating                                       | 30 A                                                         |                                                       |  |
| Operating temperature range                                  | -40 °C to +85 °C                                             |                                                       |  |
| TEMPERATURE COEFFICIENTS · WARRANTY                          |                                                              |                                                       |  |
| Temp. coeff. Pmax / Voc / Isc                                | -0.29 % / -0.25 % / +0.045 % per °C                          |                                                       |  |
| Product warranty                                             | 15 years                                                     |                                                       |  |
| Linear power warranty                                        | 30 years · 87.4 % at year-30                                 |                                                       |  |
| Certifications                                               | ISO 9001 / 14001 / 45001, IEC 61215, 61730, 61701, 62716, CE |                                                       |  |

**Charging time reference** · Battery max charge current 100 A × 25.6 V = **2.56 kW** caps the charging power. With 6 × 620 W (3.72 kWp) on a sunny day (~3.16 kW real output), the battery charges at the 2.56 kW cap: **0 % → 100 % in about 2 hours (2.1 h with conversion losses)**. Cloudy ≈ 2.9 h · with 1 kW home load ≈ 2.5 h. All figures at 25 °C and STC conditions.