

## ST050-250CF

## PowerKeeper Modular C&amp;I Energy Storage System

**Flexible & Scalable**

- 50kWh stack-based module, up to 5 stacks expandable to 250kWh
- Optional long-duration combiner box supports 2–4 clusters, expandable to 1000kWh & 9h
- Standardized design simplifies warehousing and distribution

**Fast Deployment**

- Pre-built design with simplified wiring reduces installation time
- Suitable for both new and retrofit projects, with rapid site deployment
- Supports mixed new & aged modules with active balancing

**Safety & Reliable**

- Pack-level thermal runaway protection, smoke detection and explosion relief valve
- IP66 & C5 protection, enhanced flood resistance, withstanding 50 cm submersion for 24 hours
- Seamless off-grid transfer  $\leq 10\text{ms}$  ensures load continuity

**Smart O&M**

- User-friendly monitoring via logger with cloud-based energy optimization
- OTA upgrades and predictive diagnostics reduce maintenance costs
- Smooth integration with legacy EMS and existing meter



| Product Name                             |                                                                                           | ST050-250CF       |                   |                   |               |
|------------------------------------------|-------------------------------------------------------------------------------------------|-------------------|-------------------|-------------------|---------------|
| Battery Stack                            |                                                                                           | ST050CF           |                   |                   |               |
| Cell type                                | LFP 3.2 V                                                                                 |                   |                   |                   |               |
| Nominal capacity                         | 49.9 kWh                                                                                  |                   |                   |                   |               |
| Usable battery capacity                  | 49.9 kWh                                                                                  |                   |                   |                   |               |
| Depth of discharge ( DOD )               | 0 % - 100 %                                                                               |                   |                   |                   |               |
| Nominal voltage range                    | 129.6 V - 175.2 V                                                                         |                   |                   |                   |               |
| Nominal DC Voltage                       | 153.6 V                                                                                   |                   |                   |                   |               |
| Nominal charge / discharge current       | 162.5 A ( 0.5P )                                                                          |                   |                   |                   |               |
| Max charge / discharge current           | 192 A                                                                                     |                   |                   |                   |               |
| Weight ( per stack )                     | ≤430 kg                                                                                   |                   |                   |                   |               |
| Dimensions ( W * H * D )                 | 860 mm * 1500 mm * 410 mm                                                                 |                   |                   |                   |               |
| System Specifications                    |                                                                                           |                   |                   |                   |               |
| Auxiliary power supply                   | Internal power supply                                                                     |                   |                   |                   |               |
| Installation method                      | Floor-standing                                                                            |                   |                   |                   |               |
| Noise level                              | ≤ 60 dB ( A ) @ 1m, 25 °C                                                                 |                   |                   |                   |               |
| Operation temperature range              | Charge: 0 °C - 55 °C / -20 °C - 55 °C ( optional )<br>Discharge: -20 °C - 55 °C           |                   |                   |                   |               |
| Storage temperature range                | -30 °C - 55 °C                                                                            |                   |                   |                   |               |
| Operation humidity range                 | 0% ~ 100% RH, non-condensing                                                              |                   |                   |                   |               |
| Max. operation altitude                  | 3000 m                                                                                    |                   |                   |                   |               |
| Degree of protection                     | IP66                                                                                      |                   |                   |                   |               |
| Anti-corrosion degree                    | C5                                                                                        |                   |                   |                   |               |
| Temperature control method               | Forced air cooling                                                                        |                   |                   |                   |               |
| Warranty <sup>(*)</sup>                  | 10 Years                                                                                  |                   |                   |                   |               |
| Compliance & Safety                      |                                                                                           |                   |                   |                   |               |
| Standard compliance                      | IEC62619, IEC63056, UN38.3; IEC62477-1, IEC62040, IEC61000-6-1/6-3; IEC62933-5-2, UL9540A |                   |                   |                   |               |
| Fire suppression system                  | Aerosol, smoke sensor and explosion relief valve                                          |                   |                   |                   |               |
| EMC class                                | Class B                                                                                   |                   |                   |                   |               |
| Standard system configurations           |                                                                                           |                   |                   |                   |               |
| Type designation                         | ST050CF                                                                                   | ST100CF           | ST150CF           | ST200CF           | ST250CF       |
| Nominal battery capacity <sup>(*)2</sup> | 49.9 kWh                                                                                  | 99.8 kWh          | 149.8 kWh         | 199.7 kWh         | 249.6 kWh     |
| Usable battery capacity                  | 49.9 kWh                                                                                  | 99.8 kWh          | 149.8 kWh         | 199.7 kWh         | 249.6 kWh     |
| Rated DC Power                           | 25.0 kW                                                                                   | 49.9 kW           | 74.9 kW           | 99.8 kW           | 124.8 kW      |
| Nominal voltage range                    | 129.6 V - 175.2 V                                                                         | 259.2 V - 350.4 V | 388.8 V - 525.6 V | 518.4 V - 700.8 V | 648 V - 876 V |
| Nominal Voltage                          | 153.6 V                                                                                   | 307.2 V           | 460.8 V           | 614.4 V           | 768 V         |
| Nominal charge / discharge current       | 162.5 A                                                                                   | 162.5 A           | 162.5 A           | 162.5 A           | 162.5 A       |
| Max charge / discharge current           | 192 A                                                                                     | 192 A             | 192 A             | 192 A             | 192 A         |
| Country of manufacture                   | China                                                                                     |                   |                   |                   |               |

1. Refer to battery warranty letter for conditional application

2. The optional long-duration combiner box supports 2-4 clusters in parallel, expandable up to 1000kWh & 9h

