SUNGROW
Clean power for all

Preliminary

# ST050-250CF

## PowerKeeper Modular C&I Energy Storage System

### Flexible & Scalable

- 12.5 kWh pack-based design supports flexible configuration up to 250 kWh per system
- Optional long-duration combiner box supports 2–4 clusters, expandable to 1000 kWh & 8h
- 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

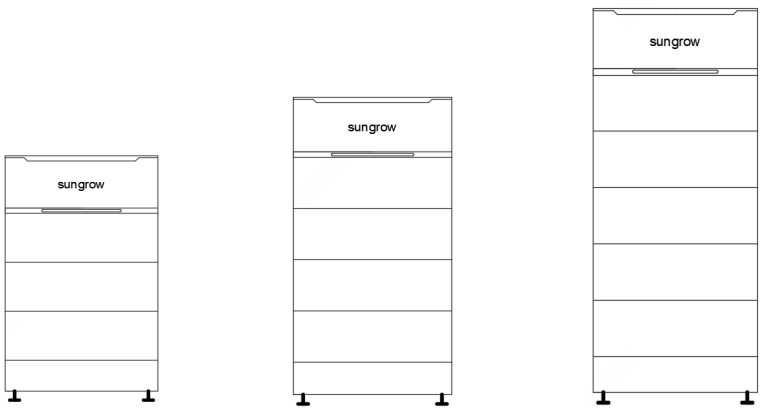
### Safety & Reliable

- 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 ≤ 10ms 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 pack | STC12.5 | | |
| Cell type | LFP 3.2 V | | |
| Nominal capacity | 12.48 kWh | | |
| Depth of discharge ( DOD ) | 0 % - 100 % | | |
| Nominal voltage range | 32.4 V ~ 43.8 V | | |
| Nominal charge / discharge rate | 0.5 P | | |
| Weight ( per pack ) | ≤ 90 kg | | |
| Dimensions ( W * H * D ) | 800 mm * 270 mm * 405 mm | | |
| System Specifications | | | |
| Auxiliary power supply | Internal power supply | | |
| Installation method | Floor-standing | | |
| Noise level | ≤ 60 dB ( A ) @ 1 m, 25 ℃ | | |
| Operation temperature range | Charge: 0 ℃ ~ 55 ℃ / -20 ℃ ~ 55 ℃ ( optional )<br>Discharge: -20 ℃ ~ 55 ℃ | | |
| Storage temperature range | -30 ℃ ~ 55 ℃ | | |
| 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 | | |
| Compliance & Safety | | | |
| Standard compliance | IEC / EN 62619, IEC / EN 63056, UN 38.3; IEC / EN62477-1, IEC / EN 62040, IEC / EN 61000-6-1 / 6-3; VDE 2510-50; IEC / EN 62933-5-2, UL 9540A | | |
| Fire suppression system | Aerosol, smoke sensor and explosion relief valve | | |
| EMC class | Class B | | |
| Base configuration options | | | |
| |  | | |
| Number of packs | 3 PCS( * ) | 4 PCS | 5 PCS |
| Stack capacity ( * ) | 37.4 kWh | 49.9 kWh | 62.4 kWh |
| Stack weight | 340 kg | 430 kg | 520 kg |
| Stack demension ( W * H * D ) | 800 mm * 1297 mm * 405 mm | 800 mm * 1567 mm * 405 mm | 800 mm * 1837 mm * 405 mm |
| Typical system configurations | | | |
| ST050CF 49.9 kWh | | *1 | |
| ST062CF 62.4 kWh | | | *1 |
| ST075CF 74.9 kWh | *2 | | |
| ST100CF 99.8 kWh | | *2 | |
| ST150CF 149.8 kWh | | *3 | |
| ST200CF 199.7 kWh | | *4 | |
| ST250CF 249.6 kWh | | | *4 |

1. A single 3-pack stack cannot operate independently, the minimum system capacity is 49.9 kWh
2. The optional long-duration combiner box supports 2–4 clusters in parallel, expandable up to 1000kWh & 8h
3. "Pre-built stack (50kWh)" consists of four pre-built battery packs for integrated delivery and installation, see user manual for details

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