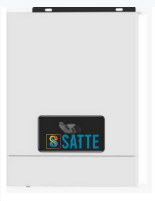


SML OFF-GRID SOLAR INVERTER

Document No.	SATTE-DS-SML-001	Revision	2.0
Issue Date	September 2026	Language	English



Wall-mounted pure sine wave off-grid inverter/charger with integrated 80 A MPPT solar controller and a wide 30–400 VDC PV input window. Wi-Fi and GPRS monitoring as standard.

2–3.2
KVA RATED POWER

80 A
MPPT CONTROLLER

400 V
MAX PV INPUT

Wi-Fi
GPRS MONITORING

TYPICAL APPLICATIONS

- **Residential solar systems** — whole-home backup for lighting, refrigeration, TV and small pumps.
- **Small commercial installations** — offices and retail requiring uninterrupted supply.
- **Telecom base stations** — remote sites with unreliable or absent grid supply.
- **Rural electrification** — village-level household and community power.

KEY FEATURES

- Pure sine wave output for motor and electronic loads.
- Built-in 80 A MPPT solar charge controller.
- Wide PV input voltage range 30–400 VDC for longer, lower-current strings.
- Solar energy is delivered to the load first, then to battery charging.
- Wi-Fi and GPRS remote monitoring for iOS and Android.
- Simultaneous solar + AC charging up to 80 A total.
- Smart charge profile, lithium (LiFePO4) compatible; anti-dust kit for harsh environments.

TECHNICAL SPECIFICATION

PARAMETER	SML-2000-12	SML-3200-24
GENERAL		
Rated Power	2000 VA / 1600 W	3200 VA / 3000 W
Battery System Voltage	12 VDC	24 VDC
AC INPUT		
Nominal Input Voltage	230 VAC	
Selectable Input Range — Computer Loads	170 – 280 VAC	
Selectable Input Range — Appliance Loads	90 – 280 VAC	
Input Frequency Range	50 Hz / 60 Hz (auto sensing)	
AC OUTPUT		
Output Voltage Regulation	230 VAC ± 5 %	
Output Waveform	Pure sine wave	
Surge Power (20 ms)	4000 VA	6400 VA
Peak Efficiency — PV to Inverter	98 %	
Peak Efficiency — Battery to Inverter	94 %	
Transfer Time — Computer Loads	10 ms	
Transfer Time — Appliance Loads	20 ms	
BATTERY & CHARGER		
Nominal Battery Voltage	12 VDC	24 VDC
Float Charge Voltage	13.5 VDC	27.0 VDC
Overcharge Protection	16.0 VDC	33.0 VDC
Maximum AC Charging Current	60 A	
SOLAR CHARGER (MPPT)		
Solar Charger Type	MPPT	
Maximum PV Array Power	3000 W	
MPPT Operating Voltage Range	30 – 400 VDC	
Maximum PV Open-Circuit Voltage (V _{oc})	400 VDC	
Maximum PV Input Current	1 × 13 A (single tracker)	
Maximum Solar Charging Current	80 A	
Maximum Solar + AC Charging Current	80 A	
MECHANICAL		
Dimensions (H × W × D)	357 × 273 × 95 mm	
Carton Dimensions (H × W × D)	435 × 335 × 165 mm	
Net Weight	4.6 kg	4.8 kg
Gross Weight	5.6 kg	5.8 kg
Mounting	Wall-mounted	
BATTERY BANK CONFIGURATION — BATTERIES ONLY, NOT SOLAR PANELS ¹		
Battery Modules in Series	Not permitted — parallel connection only	
Compatible SATTE Lithium Battery	SH-UIB-P12100 / P12150 / P12200 (12.8 V)	S200Ah, 24 V 200 Ah (4.8 kWh)
Min. Battery Modules — 12.8 V (SH-UIB series)	1	—
Min. Battery Modules — S200Ah, 24 V 200 Ah (4.8 kWh)	—	1
Max. Battery Modules in Parallel	4	2
Recommended Battery Bank Capacity	2.6 – 5.1 kWh	7.2 – 9.6 kWh
COMMUNICATION, ENVIRONMENT & COMPLIANCE		
Communication Interface	RS232 / GPRS / Wi-Fi	
Remote Monitoring (Wi-Fi / app)	Yes — Wi-Fi or GPRS dongle, iOS and Android	
Operating Temperature	–10 °C to +50 °C	
Relative Humidity	5 % to 95 %, non-condensing	
Cooling	Forced air	
Compliance / Safety Mark	CE	

BATTERY COMPATIBILITY

ITEM	DETAIL
SATTE batteries	SH-UIB-P12100 / P12150 / P12200 (12.8 V) · S200Ah (24 V, 200 Ah)
Battery types supported	LiFePO4 (lithium); sealed lead-acid, AGM and gel
Compatible third-party brands	Pylontech · Dyness · Hubble · Freedom Won · Felicity · Revov · PYTES · BSLBATT · Shoto · GSL · Greenrich · UZ Energy · Weco · Narada · Deye/Sunsynk · Growatt · GoodWe · Victron · SofarSolar · LuxPower · Solis · SMA · SRNE · Outback · AlphaESS
Not supported	BYD, all families — high-voltage models cannot connect; 48 V models are not on BYD's approved inverter list
Solar modules / generators / grid	Any brand, within the voltage, current and frequency limits in this datasheet
Verification required	Bench-test each battery model before sale — see document SATTE-TG-COMPAT-001

Note 1 — Battery bank. Lithium modules with an integral BMS must never be wired in series. The SML-2000-12 takes the SATTE SH-UIB-P 12.8 V lithium range (100 Ah, 150 Ah or 200 Ah), or a lead-acid, AGM or gel bank. Maximum module count is the largest bank this inverter's own solar array can fully recharge in a single day.

PV array sizing. The 3000 W figure is the maximum array the MPPT input may be connected to. Battery charging power is separately limited by the 80 A charge current: approximately 1.1 kW at 12 V and 2.2 kW at 24 V. Oversizing the array above these values raises daily yield in poor light but does not raise peak charge rate. Any surplus is limited by the controller and does not damage the unit.

String voltage. Total array open-circuit voltage must not exceed 400 VDC at the lowest expected ambient temperature. The unit will not start below 30 VDC.

Battery settings. Float and overcharge values shown are the factory lead-acid profile. When lithium (LiFePO4) batteries are used, charge parameters must be set to match the battery manufacturer's specification and the battery BMS.

Model selection. Where three-phase output, grid export or parallel operation is required, specify the SATTE SNM-ECO series instead.