



CATALOGUE / ENGLISH

INVERTERS & ENERGY STORAGE

One ecosystem. Powerful configurations.



3-125 kW

Hybrid inverters

5-112.5 kWh

Storage portfolio

PROUDLY VIETNAMESE

HOTLINE / ZALO 0898.60.3366

HCMC: 58 Raymondienne, Phu My Hung, Tan My Ward

Hanoi: A2.10 BT120, Thanh Ha Urban Area, Binh Minh Commune

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samuraisolar.com.vn | 10/2026

The complete portfolio

Three hybrid inverter families, low-voltage batteries and modular ESS for residential, commercial and industrial applications.

H1-LV

Single-phase residential hybrid | 3 / 3.6 / 5 / 6 / 8 / 10 / 12 kW

H3-HV-150

Three-phase commercial & industrial hybrid | 25 / 29.9 / 30 / 40 / 50 kW

H3-HV-300

High-power three-phase hybrid | 75 / 80 / 99 / 100 / 125 kW

BAT-LVDC

Low-voltage energy storage batteries | 5 / 10 kWh

ESS

Modular commercial & industrial storage system | 64.3 / 80.3 / 96.4 / 112.5 kWh

Samurai model structure

SMR-H1-[kW]-LV-[A]

SMR-H3-[kW]-HV-150 / HV-300

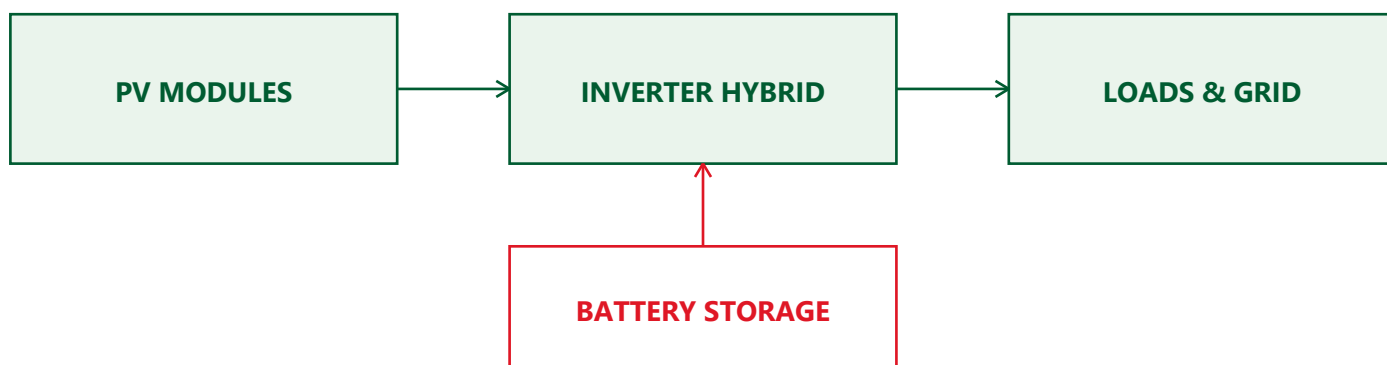
SMR-BAT-LVDC-[kWh]

SMR-BAT-HV-[kWh]

H1: single-phase hybrid; H3: three-phase hybrid. LV/HV: low-/high-voltage battery platform. Current suffix identifies the charge/discharge class; consult each model table for exact limits. Complete systems use SMR-ESS-[kW]-[kWh] for the finalized project configuration.

The right system. The right performance.

From rooftop PV to backup power, a hybrid inverter connects solar, battery storage and the grid in one energy-management platform.



Homes and single-phase loads

Select H1-LV by load rating, battery current and PV string count. Verify LV system voltage and BMS; 5/10 kWh capacity alone does not establish direct compatibility.

Commercial and industrial

H3-HV-150 covers 25-50 kW; H3-HV-300 covers 75-125 kW. Check battery voltage, MPPT limits, three-phase loads and backup requirements before choosing a model.

Modular ESS

64.3-112.5 kWh capacities require a suitable cabinet and inverter configuration. Check voltage across the SOC range, BMS communication, current and environmental conditions; do not assume every combination is compatible.

Implementation guidance

Use a qualified installer. Size PV strings using cold-condition Voc, short-circuit current and MPPT operating limits. Peak backup power has a time limit and is not a continuous rating.

H1-LV

Single-phase residential hybrid

200%

PV oversizing

<4 ms

Backup transfer

IP66

Protection

01 3-in-1 port: generator, smart loads or on-grid inverter.

02 Micro-grid operation with a PV inverter.

03 On- and off-grid parallel operation, up to 6 units.

04 Up to 20 A DC input per string; model/MPPT limits apply (*6).

05 200% PV input oversizing.

06 AI-driven AFCI is optional and purchased separately.

07 IP66 ingress protection.

08 Smart load control; seamless switching to backup in under 4 ms.



Product models

SMR-H1-3-LV-70 / SMR-H1-3.6-LV-90 / SMR-H1-5-LV-120 / SMR-H1-6-LV-140 / SMR-H1-8-LV-160 / SMR-H1-10-LV-200 / SMR-H1-12-LV-240

H1-LV | Complete specifications

Model group: SMR-H1-3-LV-70 / SMR-H1-3.6-LV-90 / SMR-H1-5-LV-120

Parameter	SMR-H1-3-LV-70	SMR-H1-3.6-LV-90	SMR-H1-5-LV-120
Battery input			
Max. continuous charge/discharge current (A)	70	90	120
Max. charging power (kW)	3.0 *2	3.6 *2	5.0 *2
Max. discharging power (kW)	3.3 *2	3.96 *2	5.5 *2
PV string input			
Max. input power (kW)	6.0	7.2	10.0
Max. input current per MPPT (A)	20	20	20
Max. short circuit current per MPPT (A)	26	26	26
Number of MPPT trackers	1	2	2
Number of strings per MPPT	1	1	1
AC output (on-grid)			
Nominal output power (kW)	3.0	3.6	5.0
Max. AC active power (kW) *7 *8	3.3	3.96 *9	5.5
Max. apparent power output to grid (kVA) *7 *8	3.3	3.96 *9	5.5
Max. apparent power from grid (kVA)	7.04	7.04	8.8
Max. AC current output to grid (A)	15	18 *10	25
Max. AC current from grid (A)	32	32	40
AC output (backup)			
Backup nominal apparent power (kVA)	3.0	3.6	5.0
Max. output apparent power without grid (kVA)	3.3 (6.0, 10s)	3.96 (7.2, 10s)	5.5 (10.0, 10s)
Max. output apparent power with grid (kVA)	7.04	7.04	8.8
Max. output current without grid (A)	15	18	25
Max. output current with grid (A)	32	32	40

Parameter	SMR-H1-3-LV-70	SMR-H1-3.6-LV-90	SMR-H1-5-LV-120
AC data (generator)			
Nominal apparent power from generator (kVA)	3.0	3.6	5.0
Max. apparent power from generator (kVA)	3.3	3.96	5.5
Max. AC current from generator (A)	32.0	32.0	40.0
General data			
Cooling method	Natural convection	Natural convection	Natural convection
Weight (kg)	14.5	15.5	15.5
Dimensions W × H × D (mm)	560 × 415 × 204	560 × 415 × 204	560 × 415 × 204

H1-LV | Complete specifications

Model group: SMR-H1-6-LV-140 / SMR-H1-8-LV-160

Parameter	SMR-H1-6-LV-140	SMR-H1-8-LV-160
Battery input		
Max. continuous charge/discharge current (A)	140	160
Max. charging power (kW)	6.0 *2	8.0 *3
Max. discharging power (kW)	6.6 *2	8.8 *3
PV string input		
Max. input power (kW)	12.0	16.0
Max. input current per MPPT (A)	20	32 / 16 *6
Max. short circuit current per MPPT (A)	26	48 / 24
Number of MPPT trackers	2	2
Number of strings per MPPT	1	2 / 1
AC output (on-grid)		
Nominal output power (kW)	6.0	8.0
Max. AC active power (kW) *7 *8	6.6	8.8
Max. apparent power output to grid (kVA) *7 *8	6.6	8.8
Max. apparent power from grid (kVA)	8.8	16.5
Max. AC current output to grid (A)	30	40
Max. AC current from grid (A)	40	75
AC output (backup)		
Backup nominal apparent power (kVA)	6.0	8.0
Max. output apparent power without grid (kVA)	6.6 (12.0, 10s)	8.8 (16.0, 10s)
Max. output apparent power with grid (kVA)	8.8	16.5
Max. output current without grid (A)	30	40
Max. output current with grid (A)	40	75

Parameter	SMR-H1-6-LV-140	SMR-H1-8-LV-160
AC data (generator)		
Nominal apparent power from generator (kVA)	6.0	8.0
Max. apparent power from generator (kVA)	6.6	8.8
Max. AC current from generator (A)	40.0	50.0
General data		
Cooling method	Natural convection	Smart fan cooling
Weight (kg)	15.5	27.0
Dimensions W × H × D (mm)	560 × 415 × 204	560 × 444.5 × 226

H1-LV | Complete specifications

Model group: SMR-H1-10-LV-200 / SMR-H1-12-LV-240

Parameter	SMR-H1-10-LV-200	SMR-H1-12-LV-240
Battery input		
Max. continuous charge/discharge current (A)	200	240
Max. charging power (kW)	10.0 *3	12.0 *3
Max. discharging power (kW)	11.0 *3	13.2 *3
PV string input		
Max. input power (kW)	20.0	24.0
Max. input current per MPPT (A)	32 / 32 *6	32 / 32 *6
Max. short circuit current per MPPT (A)	48 / 48	48 / 48
Number of MPPT trackers	2	2
Number of strings per MPPT	2 / 2	2 / 2
AC output (on-grid)		
Nominal output power (kW)	10.0	12.0
Max. AC active power (kW) *7 *8	11.0	13.2
Max. apparent power output to grid (kVA) *7 *8	11.0	13.2
Max. apparent power from grid (kVA)	16.5	16.5
Max. AC current output to grid (A)	50	60
Max. AC current from grid (A)	75	75
AC output (backup)		
Backup nominal apparent power (kVA)	10.0	12.0
Max. output apparent power without grid (kVA)	11.0 (20.0, 10s)	13.2 (24.0, 10s)
Max. output apparent power with grid (kVA)	16.5	16.5
Max. output current without grid (A)	50	60
Max. output current with grid (A)	75	75

Parameter	SMR-H1-10-LV-200	SMR-H1-12-LV-240
AC data (generator)		
Nominal apparent power from generator (kVA)	10.0	12.0
Max. apparent power from generator (kVA)	11.0	13.2
Max. AC current from generator (A)	54.5	54.5
General data		
Cooling method	Smart fan cooling	Smart fan cooling
Weight (kg)	29.0	29.0
Dimensions W × H × D (mm)	560 × 444.5 × 226	560 × 444.5 × 226

H1-LV | Complete specifications

Shared specifications applicable to all models in this family.

Parameter	All models
Battery input	
Battery type *1	Li-Ion / Lead-acid
Nominal battery voltage (V)	48
Battery voltage range (V)	40 ~ 60
Start-up voltage (V)	44.2
Number of battery inputs	1
PV string input	
Max. input voltage (V) *4	600
MPPT operating voltage range (V) *5	60 ~ 550
Start-up voltage (V)	58
Nominal input voltage (V)	360
AC output (on-grid)	
Nominal output voltage (V)	220 / 230 / 240
Output voltage range (V)	170 ~ 280
Nominal AC grid frequency (Hz)	50 / 60
AC grid frequency range (Hz)	45 ~ 55 / 55 ~ 65
Power factor	~1; adjustable from 0.8 leading to 0.8 lagging
Max. total harmonic distortion	<3%
AC output (backup)	
Nominal output voltage (V)	220 / 230 / 240
Nominal output frequency (Hz)	50 / 60
Output THDv at linear load	<3%
AC data (generator)	
Nominal input voltage (V)	220 / 230 / 240
Input voltage range (V)	170 ~ 280
Nominal generator frequency (Hz)	50 / 60

Parameter	All models
Generator frequency range (Hz)	45 ~ 55 / 55 ~ 65
Efficiency	
Max. efficiency	97.6%
European efficiency	96.2%
Max. battery to AC efficiency	95.5%
MPPT efficiency	99.9%
General data	
Operating temperature range (°C)	-35 ~ +60
Relative humidity	0 ~ 95%
Max. operating altitude (m)	3000
User interface	LCD, WLAN + APP
Communication with BMS	CAN
Communication	RS485, WiFi + LAN + Bluetooth
Communication protocols	Modbus-RTU, Modbus-TCP
Topology	Non-isolated
Ingress protection	IP66
Mounting method	Wall mounted

H1-LV | Conditions & notes

*1: Li-ion batteries include two mainstream types: LFP and ternary lithium.

*2: Above 500 V PV input, battery charge/discharge power is gradually limited; the limit is lifted when voltage falls.

*3: Above 490 V PV input, battery charge/discharge power is gradually limited; the limit is lifted when voltage falls.

*4: At 560-600 V input the inverter enters standby; it resumes when voltage returns to the MPPT range.

*5: Refer to the user manual for the MPPT voltage range at nominal power.

*6: Maximum current per string is 16 A for configurations marked *6; a two-string MPPT has 16 A per string.

*7: For Sri Lanka, maximum output equals the respective nominal rating: 3 / 3.6 / 5 / 6 / 8 / 10 / 12 kW.

*8: For Brazil and Chile, maximum AC output is P_n ; the 8 kW model is 8000 W (VA).

*9: For Jordan, the 3.6 kW model has maximum AC active/apparent grid output of 3.6 kW/kVA.

*10: For Jordan, maximum grid output current for the 3.6 kW model is 15.7 A.

AFCI is optional; optional functions/devices are purchased separately. Contact Samurai Solar for current certificates.

Values apply to the exact model and configuration in each table. Dimensions are width × height × depth. Optional functions are not standard equipment.

H3-HV-150

Three-phase commercial & industrial hybrid

200%

PV oversizing

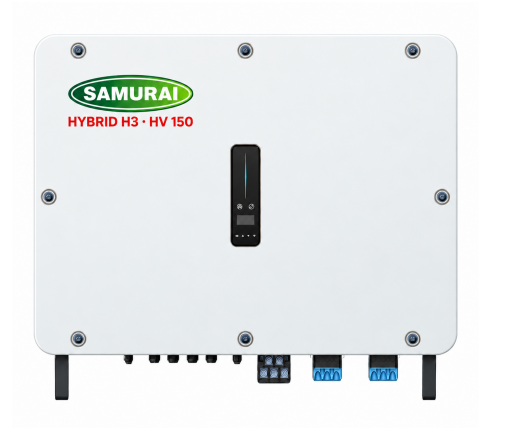
150% / 10s

Backup peak

<10 ms

Transfer

- 01 Expand with up to 10 parallel inverters.
- 02 High 150 A charge/discharge current; up to 200% PV oversizing.
- 03 100% three-phase unbalanced AC output.
- 04 150% peak backup output for 10 seconds.
- 05 Diesel generator connection supported.
- 06 15-minute dynamic pricing, ToU and intelligent peak shaving.
- 07 On/off-grid switching in under 10 ms.
- 08 IP66; Type II SPD on AC and DC; emergency stop function.



Product models

SMR-H3-25-HV-150 / SMR-H3-29.9-HV-150 / SMR-H3-30-HV-150 / SMR-H3-40-HV-150 / SMR-H3-50-HV-150

H3-HV-150 | Complete specifications

Model group: SMR-H3-25-HV-150 / SMR-H3-29.9-HV-150 / SMR-H3-30-HV-150

Parameter	SMR-H3-25-HV-150	SMR-H3-29.9-HV-150	SMR-H3-30-HV-150
PV side			
Max. PV array power (kWp)	50	60	60
Battery side			
Max. charge/discharge power (kW)	25/25	30/30	30/30
Grid side			
Rated output power (kW)	25	29.9	30
Max. output apparent power (kVA)	25	29.9	30
Max. input apparent power (kVA) **	50	60	60
Max. AC input current (A)	75.8	90.9	90.9
Rated output current (A)	37.9/36.2/34.7	45.3/43.3/41.5	45.5/43.5/41.7
Max. output current (A)	37.9	45.3	45.5
Backup side			
Rated output power (kW)	25	29.9	30
Peak output apparent power (kVA)	37.5 @10s	45 @10s	45 @10s
Rated output current (A)	37.9/36.2/34.7	45.3/43.3/41.5	45.5/43.5/41.7
Generator side			
Max. input apparent power (kVA)	30	36	36
Max. input current (A)	45.5	54.5	54.5

H3-HV-150 | Complete specifications

Model group: SMR-H3-40-HV-150 / SMR-H3-50-HV-150

Parameter	SMR-H3-40-HV-150	SMR-H3-50-HV-150
PV side		
Max. PV array power (kWp)	80	100
Battery side		
Max. charge/discharge power (kW)	40/40	50/50
Grid side		
Rated output power (kW)	40	50
Max. output apparent power (kVA)	40	50
Max. input apparent power (kVA) **	80	80
Max. AC input current (A)	121.2	121.2
Rated output current (A)	60.6/58/55.6	75.8/72.5/69.4
Max. output current (A)	60.6	75.8
Backup side		
Rated output power (kW)	40	50
Peak output apparent power (kVA)	60 @10s	75 @10s
Rated output current (A)	60.6/58/55.6	75.8/72.5/69.4
Generator side		
Max. input apparent power (kVA)	48	60
Max. input current (A)	72.7	90.9

H3-HV-150 | Complete specifications

Shared specifications applicable to all models in this family.

Parameter	All models
PV side	
Start-up voltage (V)	135
Max. PV input voltage (V) *	1000
Rated PV input voltage (V)	620
MPPT operating voltage range (V) *	200 ~ 950
Number of MPP trackers	4
Number of strings per MPPT	2
Max. input current per MPPT (A)	40 × 4
Max. short-circuit current per MPPT (A)	50 × 4
Battery side	
Battery type	Lithium-ion
Battery voltage range (V)	150 ~ 840
Number of battery inputs	1
Max. charge/discharge current (A)	150 / 150
Grid side	
Rated AC voltage	3L/N/PE; 220/380; 230/400; 240/415 V
Rated AC frequency (Hz)	50 / 60
THDi at rated power	<3%
Power factor	0.8 leading to 0.8 lagging
Backup side	
On/off-grid switching time (ms)	<10
Rated output voltage	3L/N/PE; 220/380; 230/400; 240/415 V
Rated output frequency (Hz)	50 / 60
THDv at linear load	<3%
Generator side	
Rated AC voltage	3L/N/PE; 220/380; 230/400; 240/415 V

Parameter	All models
Rated AC frequency (Hz)	50 / 60
Efficiency	
Max. efficiency	97.60%
European efficiency	97.10%
MPPT efficiency	99.90%
Max. battery to AC efficiency	97.50%
Max. PV to battery efficiency	98.50%
Protection	
Integrated protection	DC reverse polarity; battery input reverse connection; insulation resistance; surge protection DC/AC: Type II/II; over-temperature; residual current; anti-islanding; AC over-voltage; overload; AC short-circuit protection.
General data	
Dimensions W × H × D (mm)	919 × 739 × 305
Ingress protection	IP66
Standby self-consumption (W)	<40
Topology	Transformerless
Noise level (dB)	<65
Operating temperature range (°C)	-30 ~ 60
Relative humidity (%)	0 ~ 100
Weight (kg)	90.5
Max. operating altitude (m)	3000
Over-voltage category	II (PV + Battery), III (Mains)
Cooling	Smart fan
Display	OLED & LED
Communication	CAN, RS485

H3-HV-150 | Conditions & notes

- *: Maximum operating PV input voltage is 950 V; otherwise the inverter is in standby.
 - ** : Maximum input apparent power is grid import used to supply backup loads and charge the battery.
- Values apply to the exact model and configuration in each table. Dimensions are width × height × depth.
Optional functions are not standard equipment.

H3-HV-300

High-power three-phase hybrid

300 A

165 kVA / 10s

IP66 / C4

Charge / discharge

Backup peak

Protection

01 200% PV oversizing; 300 A charge/discharge; 165 kVA peak backup for 10 seconds.

02 Up to 24 A PV input per string; observe the total limit of each MPPT.

03 Dual independent battery ports; on-grid, off-grid and parallel support.

04 Diesel generator support; 100% unbalanced and half-wave loads.

05 AI EMS with PV forecasting; dynamic pricing, ToU optimization and accurate export control.

06 Six preset operating modes.

07 IP66, C4 corrosion resistance and a 330 A contactor.

08 Transfer in under 20 ms; auto-reverse fan for dust removal.



Product models

SMR-H3-75-HV-300 / SMR-H3-80-HV-300 / SMR-H3-99-HV-300 / SMR-H3-100-HV-300 / SMR-H3-125-HV-300

H3-HV-300 | Complete specifications

Model group: SMR-H3-75-HV-300 / SMR-H3-80-HV-300 / SMR-H3-99-HV-300

Parameter	SMR-H3-75-HV-300	SMR-H3-80-HV-300	SMR-H3-99-HV-300
PV side			
Max. PV array power (kWp)	150	160	200
Battery side			
Max. charge/discharge power (kW)	75/75	80/80	100/100
Grid side (on-grid)			
Rated output power (kW)	75.0	80.0	99.0
Max. output apparent power (kVA)	75.0	80.0	99.0
Rated output current (A)	113.6/108.7/104.2	121.2/115.9/111.1	150.0/143.5/137.5
Max. output current (A)	113.6	121.2	150.0
Backup side (off-grid)			
Rated output power (kW)	75.0	80.0	99.0
Rated output current (A)	113.6/108.7/104.2	121.2/115.9/111.1	150.0/143.5/137.5

H3-HV-300 | Complete specifications

Model group: SMR-H3-100-HV-300 / SMR-H3-125-HV-300

Parameter	SMR-H3-100-HV-300	SMR-H3-125-HV-300
PV side		
Max. PV array power (kWp)	200	250
Battery side		
Max. charge/discharge power (kW)	100/100	125/125
Grid side (on-grid)		
Rated output power (kW)	100.0	125.0
Max. output apparent power (kVA)	100.0	125.0
Rated output current (A)	151.5/144.9/138.9	189.4/181.2/173.6
Max. output current (A)	151.5	189.4
Backup side (off-grid)		
Rated output power (kW)	100.0	125.0
Rated output current (A)	151.5/144.9/138.9	189.4/181.2/173.6

H3-HV-300 | Complete specifications

Shared specifications applicable to all models in this family.

Parameter	All models
PV side	
Max. PV input voltage (V) *	1000 *
Rated PV input voltage (V)	620
Start-up voltage (V)	135
MPPT operating voltage range (V) *	160 ~ 950 *
Number of MPP trackers	6
Number of strings per MPPT	3
Max. input current per MPPT (A)	48 × 6
Max. short-circuit current per MPPT (A)	60 × 6
Battery side	
Battery type	Lithium battery with BMS
Battery voltage range (V)	300 ~ 950
Number of battery inputs	1 or 2
Max. charge/discharge current (A)	300 or 150 × 2
Grid side (on-grid)	
Rated AC voltage	3L/N/PE; 220/380; 230/400; 240/415 V
Rated AC frequency (Hz)	50 / 60
Power factor	0.8 leading to 0.8 lagging
THDi at rated power	<3%
Max. input apparent power (kVA) **	207
Rated AC voltage (grid import)	3L/N/PE; 220/380; 230/400; 240/415 V
Rated AC frequency (grid import) (Hz)	50 / 60
Max. AC input current (A)	300
Backup side (off-grid)	
Peak output apparent power (kVA)	165 @10s
Rated output voltage	3L/N/PE; 220/380; 230/400; 240/415 V

Parameter	All models
Rated output frequency (Hz)	50 / 60
On/off-grid switching time (ms)	<20
THDv at linear load	<3%
Efficiency	
MPPT efficiency	99.90%
Max. efficiency	98.00%
European efficiency	97.80%
Protection	
Integrated protection	DC reverse polarity; battery input reverse connection; insulation resistance; surge protection DC: Type I+II; AC: Type II; over-temperature; residual current; anti-islanding; AC over-voltage; overload; AC short-circuit protection.
General data	
Dimensions W × H × D (mm)	1232 × 932 × 356
Weight (kg)	164
Ingress protection	IP66
Anti-corrosion degree	C4
Standby self-consumption (W)	<35
Topology	Transformerless
Operating temperature range (°C)	-30 ~ 60
Relative humidity (%)	0 ~ 100
Max. operating altitude (m)	3000
Over-voltage category	II (PV + Battery), III (Mains + Backup)
Cooling	Smart fan
Display	LED & OLED
Communication	CAN, RS485

H3-HV-300 | Conditions & notes

*: Maximum operating PV input voltage is 950 V. Operation stops at 950-1000 V; voltage above 1000 V will damage the inverter.

**: Maximum input apparent power is grid import used to supply backup loads and charge the battery.

Values apply to the exact model and configuration in each table. Dimensions are width × height × depth. Optional functions are not standard equipment.

BAT-LVDC

Low-voltage energy storage batteries

314 Ah

8000

5 / 10 kWh

LFP cells

Cycles

Energy

01 314 Ah LFP cells; 8000-cycle lifespan.

02 130% overload support for 10 seconds.

03 Compatible with suitable low-voltage single- and three-phase inverters.

04 Mix different low-voltage batteries via a Mix Parallel Unit.

05 Aerosol fire suppression is an optional purchase; IP65 is available only on the 10 kWh model.

06 Wide operating temperature range: -20°C to 55°C.

07 Floor/wall mounting; 5 kWh model supports stacking.

08 Active balancing of battery pack voltage and SOC.



Product models

SMR-BAT-LVDC-5 / SMR-BAT-LVDC-10

BAT-LVDC | Complete specifications

Model group: SMR-BAT-LVDC-5 / SMR-BAT-LVDC-10

Parameter	SMR-BAT-LVDC-5	SMR-BAT-LVDC-10
Battery and system data		
Rated energy (kWh)	5.0	10.0
Usable energy (kWh) *1	≥4.6	≥9.2
Battery voltage range (V)	14.35 ~ 18.05	28.70 ~ 36.10
Battery nominal voltage (V)	16	32
System max. input current (A)	46	96
System max. output current (A)	50	100
System max. input/output power (kW) *2	2.5	5
System peak output power (kW) *2	3.75 (3s); 3.25 (10s)	7.5 (3s); 6.5 (10s)
Weight (kg)	45	85
Ingress protection	IP20	IP65
Dimensions W × H × D (mm)	≤450 × 450 × 233	≤470 × 755 × 266
Mounting method	Wall mounted, floor mounted, stack	Wall mounted, floor mounted

BAT-LVDC | Complete specifications

Shared specifications applicable to all models in this family.

Parameter	All models
Battery and system data	
Battery type	LFP (LiFePO4)
Rated capacity (Ah)	314
System operating voltage range (V)	45 ~ 60
Battery nominal current (A)	157.0
Battery max. current (A)	165.0
Usable extinguishing agent	CO2, H2O
Crucial materials	LiFePO4, C, Cu, LiPF6, Al, (C3H6)n
Max. storage time	-20 ~ +35°C: ≤12 months; +35 ~ +45°C: ≤6 months

BAT-LVDC | Conditions & notes

*1: Test at 100% DOD, cell voltage 2.87-3.61 V, 1.4 kW/2.8 kW charge/discharge at 25 ±2°C at beginning of life.

Usable energy is the initial design value. Actual available energy varies with charge/discharge rate, environment (e.g. temperature), transport and storage.

*2: Maximum input/output and peak power derate with temperature and SOC.

Aerosol is an optional separate purchase; IP65 applies only to 10 kWh. Battery nominal 16/32 V differs from system operating 45-60 V; use the correct system interface/conversion configuration.

Contact Samurai Solar for current certificates. Design/specifications may change without notice as part of continuous improvement.

Values apply to the exact model and configuration in each table. Dimensions are width × height × depth. Optional functions are not standard equipment.

ESS

Modular commercial & industrial storage system

64.3-112.5 kWh

25-50 kW

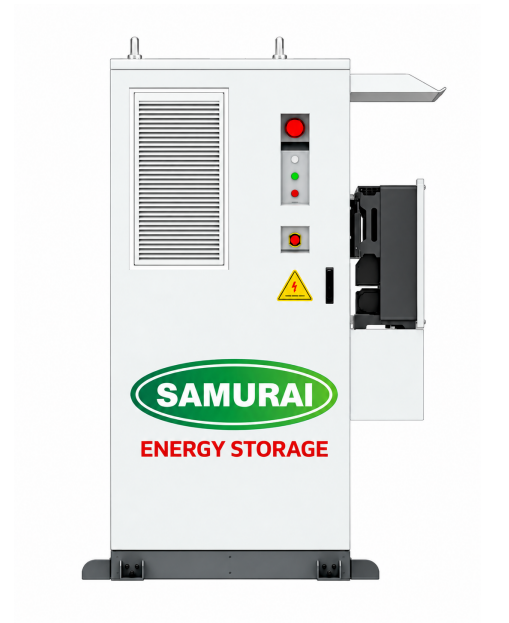
150 A

Energy

Hybrid inverter

Charge / discharge

- 01 150 A charge/discharge supports high-power cycling.
- 02 100% three-phase unbalance; 150% backup overload supports surge loads.
- 03 Modular capacities 64.3 / 80.3 / 96.4 / 112.5 kWh; inverter ratings 25 / 29.9 / 30 / 40 / 50 kW.
- 04 Four-level fire safety; IP66 inverter and IP55 battery cabinet.
- 05 Type II SPD on AC/DC; C4 corrosion protection (C5 optional).
- 06 Remote upgrades; six operating modes.
- 07 ToU supports up to 6 sub-modes and 24 time periods; dynamic pricing supported.



Product models

SMR-BAT-HV-64.3 / SMR-BAT-HV-80.3 / SMR-BAT-HV-96.4 / SMR-BAT-HV-112.5

ESS | Complete specifications

Model group: SMR-BAT-HV-64.3 / SMR-BAT-HV-80.3

Parameter	SMR-BAT-HV-64.3	SMR-BAT-HV-80.3
HV battery modules		
Battery module quantity	4 packs	5 packs
Battery system energy (kWh)	64.3	80.3
Rated voltage (V)	204.8	256
Operating voltage range (V)	166.4 ~ 233.6	208 ~ 292
System weight (kg)	1101	1214

ESS | Complete specifications

Model group: SMR-BAT-HV-96.4 / SMR-BAT-HV-112.5

Parameter	SMR-BAT-HV-96.4	SMR-BAT-HV-112.5
HV battery modules		
Battery module quantity	6 packs	7 packs
Battery system energy (kWh)	96.4	112.5
Rated voltage (V)	307.2	358.4
Operating voltage range (V)	249.6 ~ 350.4	291.2 ~ 408.8
System weight (kg)	1327	1440

ESS | Complete specifications

Shared specifications applicable to all models in this family.

Parameter	All models
HV battery modules	
Cell type	LiFePO4 / 314 Ah
Depth of discharge	90%
Max. charge/discharge current (A)	150 / 150
Cabinet system general data	
Dimensions W × H × D (mm)	1376 × 2262 × 1140
Ingress protection	Cabinet: IP55; inverter: IP66
Anti-corrosion degree	C4 (C5 optional)
Topology	Non-isolated
Noise level (dB)	<65
Operating temperature range (°C)	-20 ~ 55
Relative humidity	5% ~ 95% RH, non-condensing
Fire protection	Aerosol (Novec1230 optional) / water
Altitude (m)	≤3000
Cooling	Air conditioner: 2 kW cooling and 2 kW heating
Display	OLED & LED
Communication	CAN, RS485

ESS | Conditions & notes

*: Maximum operating PV input voltage is 950 V; otherwise the inverter is in standby.

Recommended PV power for the ESS configuration differs from the standalone inverter maximum PV array rating; use the configuration-specific table.

Select inverter, battery capacity, operating voltage and BMS according to system design; not every battery capacity is automatically compatible with every HV inverter.

Values apply to the exact model and configuration in each table. Dimensions are width × height × depth. Optional functions are not standard equipment.

ESS / H3-HV-150 | Complete specifications

Model group: SMR-H3-25-HV-150 / SMR-H3-29.9-HV-150 / SMR-H3-30-HV-150

Parameter	SMR-H3-25-HV-150	SMR-H3-29.9-HV-150	SMR-H3-30-HV-150
PV input in ESS			
Recommended max. input power (kWp)	40	48	48
Grid side in ESS			
Rated output power (kW)	25	29.9	30
Max. output apparent power (kVA)	25	29.9	30
Max. input apparent power (kVA)	50	60	60
Max. battery charging power (kW)	25	29.9	30
Rated output current (A)	37.9/36.2/34.7	45.3/43.3/41.5	45.5/43.5/41.7
Backup side in ESS			
Rated output power (kW)	25	29.9	30
Max. output apparent power (kVA)	25	29.9	30
Rated output current (A)	37.9/36.2/34.7	45.3/43.3/41.5	45.5/43.5/41.7
Generator side in ESS			
Max. input apparent power (kVA)	30	36	36
Max. battery charging power (kW)	25	29.9	30
Max. input current (A)	45.5	54.5	54.5

ESS / H3-HV-150 | Complete specifications

Model group: SMR-H3-40-HV-150 / SMR-H3-50-HV-150

Parameter	SMR-H3-40-HV-150	SMR-H3-50-HV-150
PV input in ESS		
Recommended max. input power (kWp)	64	80
Grid side in ESS		
Rated output power (kW)	40	50
Max. output apparent power (kVA)	40	50
Max. input apparent power (kVA)	80	80
Max. battery charging power (kW)	40	50
Rated output current (A)	60.6/58/55.6	75.8/72.5/69.4
Backup side in ESS		
Rated output power (kW)	40	50
Max. output apparent power (kVA)	40	50
Rated output current (A)	60.6/58/55.6	75.8/72.5/69.4
Generator side in ESS		
Max. input apparent power (kVA)	48	60
Max. battery charging power (kW)	40	50
Max. input current (A)	72.7	90.9

ESS / H3-HV-150 | Complete specifications

Shared specifications applicable to all models in this family.

Parameter	All models
PV input in ESS	
Start-up voltage (V)	135
Max. DC input voltage (V)	1000
Rated DC input voltage (V) *	620
MPPT voltage range (V)	200 ~ 950
Number of MPP trackers *	4
Number of DC inputs per MPPT	2
Max. input current (A)	40 × 4
Max. short-circuit current (A)	50 × 4
Grid side in ESS	
Rated AC voltage	3L/N/PE; 220/380; 230/400; 240/415 V
Rated AC frequency (Hz)	50 / 60
Power factor	0.8 leading to 0.8 lagging
Max. total harmonic distortion at rated power	<3%
DCI	<0.5% In
Backup side in ESS	
On/off-grid switching time (ms)	<10
Rated output voltage	3L/N/PE; 220/380; 230/400; 240/415 V
Rated output frequency (Hz)	50 / 60
Voltage harmonic distortion at rated power	<3%
Generator side in ESS	
Rated AC voltage	3L/N/PE; 220/380; 230/400; 240/415 V
Rated AC frequency (Hz)	50 / 60
Efficiency in ESS	
Max. efficiency	97.60%
European efficiency	97.10%
MPPT efficiency	99.90%

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Catalogue & datasheets | Edition 10/2026. Ratings, conditions and features are configuration-specific; this document does not replace installation manuals, certificates or batch warranty documents.