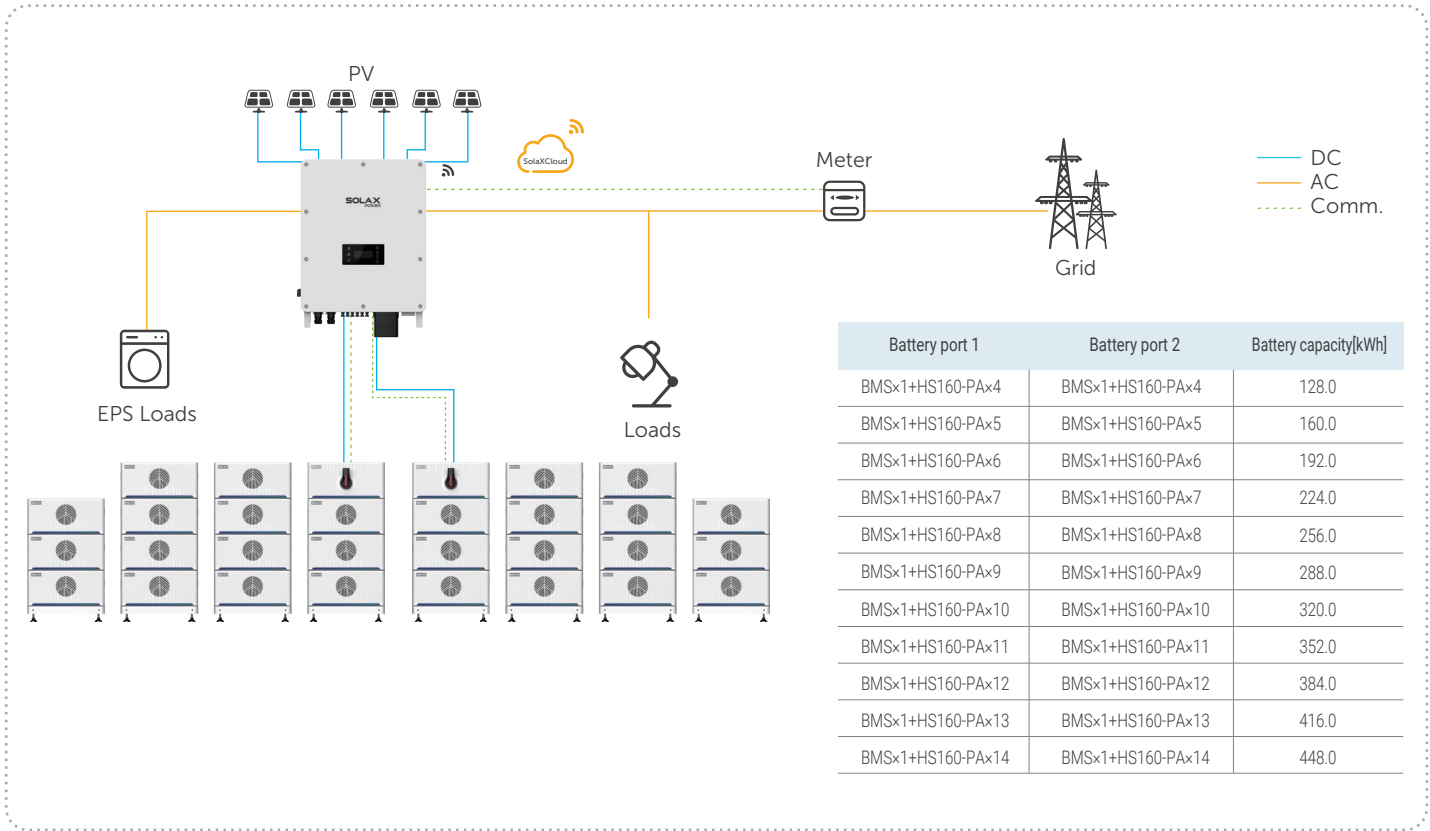
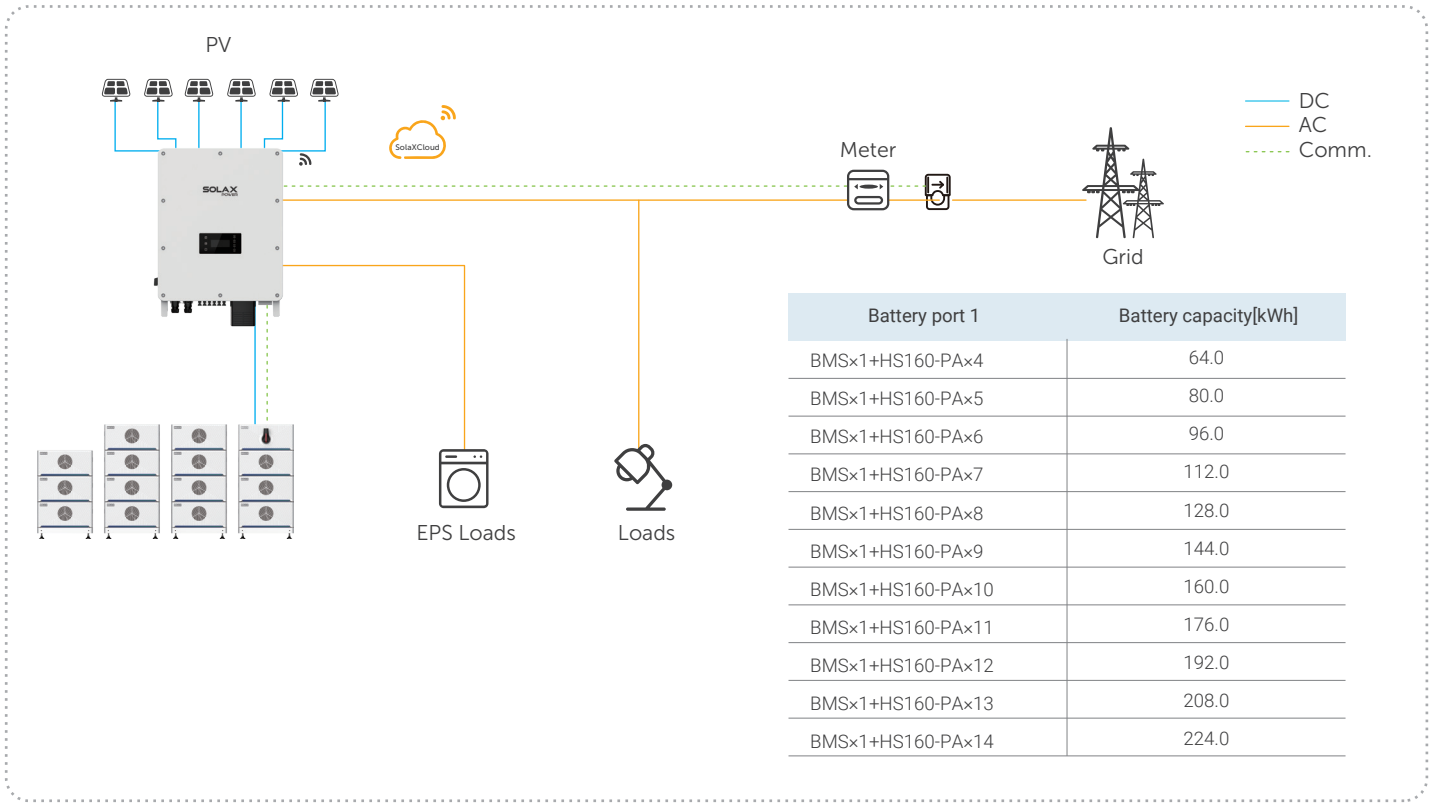


BATTERY MODULE COMBINATION TABLE



Rated / Maximum operation current and Rated / maximum power derating will occur related to temperature or SOC



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V1.1 Information may be subject to modify without notice.
650.00142.00



AELIO 50/60k+HS160-PA

49.9kW/50kW/60kW/61kW
64kWh-896kWh

SolaX Split C&I Energy Storage Solution

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X3-AELIO



* Feature to be upgraded in the future

	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-61K
PV INPUT					
Max. recommended PV array power	100 kWp	120 kWp	100 kWp	120 kWp	
Max. PV input voltage ^①	1000 V				
Rated PV input voltage	650 V				
MPPT voltage range ^②	160 ~ 950 V				
Start-up voltage	180 V				
No. of MPP trackers / strings per MPP tracker	5 / 2	6 / 2	5 / 2	6 / 2	
Max. input current per MPPT	40 A				
Max. input short circuit current per MPPT	50 A				
AC INPUT & OUTPUT (ON-GRID)					
Rated output power	49.9 kW	49.9 kW	50 kW	60 kW	61 kW
Rated output current	75.7 A @ 220 V 72.4 A @ 230 V	75.7 A @ 220 V 72.4 A @ 230 V	75.8 A @ 220 V 72.5 A @ 230 V	91.0 A @ 220 V 87.0 A @ 230 V	92.5 A @ 220 V 88.5 A @ 230 V
Max. output apparent power	49.9 kVA	49.9 kVA	55.0 kVA	66.0 kVA	66.0 kVA
Max. output continuous current	75.7 A @ 220 V 72.4 A @ 230 V	75.7 A @ 220 V 72.4 A @ 230 V	83.4 A @ 220 V 79.8 A @ 230 V	100.0 A @ 220 V 95.7 A @ 230 V	100.0 A @ 220 V 95.7 A @ 230 V
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V				
Rated AC frequency	50 Hz / 60 Hz				
AC frequency range ^③	50 ± 5 Hz / 60 ± 5 Hz				
Adjustable power factor range	~ 1 (0.8 lagging to 0.8 leading)				
THDi (rated power)	< 3%				



Flexible Configuration

- Parallel operation: supports up to 10 parallel systems, meeting power requirements from 49.9 kW to 600 kW.
- Battery options: three battery choices available.
- PV oversizing: supports up to 200% PV oversizing.



Safe and Reliable

- Three-Phase unbalance: Inverter supports 100% three-phase unbalance.
- Long-Term overload: inverter supports 110% long-term overload.
- Seamless switching: inverter supports 10ms on-grid/off-grid switching.
- Off-Grid overload: inverter supports 150% off-grid overload.



Intelligent and Convenient

- Remote monitoring: supports web/app remote data viewing and remote OTA updates.
- Versatile operating modes: supports various operating modes to meet different application scenarios such as self-consumption, peak shaving, and demand management.
- VPP Integration: supports VPP applications through IEEE2030.5, OpenADR. ✕
- Generator control: work seamlessly with generator to save fuel and back up.

	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-61K
BATTERY					
Battery type	LFP				
Battery voltage range	180 ~ 820 V				
Max. charge / discharge current	160 A (80 A × 2)				
	EPS (OFF-GRID) OUTPUT				
Rated EPS output voltage, frequency	3 / N / PE, 220 / 380 V, 50 Hz / 60 Hz 3 / N / PE, 230 / 400 V, 50 Hz / 60 Hz				
Rated EPS output power	49.9 kVA	49.9 kVA	50.0 kVA	60.0 kVA	61.0 kVA
Max. EPS output power	75 kVA, 10s	75 kVA, 10s	75 kVA, 10s	90 kVA, 10s	90 kVA, 10s
Switchover time	< 10 ms				
	EFFICIENCY				
Max. efficiency	98.0%				
European efficiency	97.2%				
	GENERAL				
Ingress protection	IP66				
Operation temperature range	-35 ~ 60°C (derating +45°C)				
Max. operating altitude	3000 m				
Relative humidity	0 ~ 100% RH (condensing)				
Overvoltage category	Mains: III, Battery: II, PV: II				
Dimensions (W × H × D)	670 × 820× 257 mm				
Net weight	< 100 kg	< 105 kg	< 100 kg	< 105 kg	
Cooling concept	Smart air cooling				
Communication interfaces	RS485-Meter, RS485-Monitor, RS485-Parallel (daisy-chain), CAN-BMS, CAN-Parallel (daisy-chain), USB, DI×2, DO×1, RCR (DI×4), DRM				
Topology	Non-isolated				
Certifications	CE, VDE4105, G99, AS4777, EN50549, CEI 0-21, IEC61727, PEA/MEA, NRS-097-2-1, RD1699, TOR				
PROTECTION					
Over / under voltage protection	Yes				
DC isolation protection	Yes				
DC reverse-polarity protection	Yes				
Grid monitoring	Yes				
DC injection monitoring	Yes				
Back feed current monitoring	Yes				
Residual current detection	Yes				
Over temperature protection	Yes				
Active anti-islanding method	Frequency shift				
Surge protection (DC / AC)	DC: Type II, AC: Type II				
Arc-fault circuit interrupter (AFCI)	Optional				
AC auxiliary power supply (APS)	Built-in				

- ① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter
- ② Input voltage exceeding the MPPT voltage range may triggers inverter protection
- ③ The AC frequency range may vary from different country codes

HS160-PA

AI-Powered Battery Management

- Early detection of abnormal cell behavior
- Predictive warning for internal short-circuit risks
- Optimized battery operation to maximize lifecycle value

Easy Installation & Maintenance

- Pre-installed terminals for faster on-site installation
- Optimized for manual handling
- Bottom leveling adjustable
- Modular design enables rapid battery cascading and replacement

*This configuration is only applicable when paired with AELIO 49.9KW, 50KW, 60KW, and 61kW inverters.
*DC parallel will be upgraded in the future.

	TS-HS640	TS-HS800	TS-HS960	TS-HS1120	TS-HS1280	TS-HS1440
GENERAL INFORMATION						
Scalability	4	5	6	7	8	9
Nominal voltage	204.8 d.c.V	256 d.c.V	307.2 d.c.V	358.4 d.c.V	409.6 d.c.V	460.8 d.c.V
Battery voltage range	169.6 - 233 d.cV	212 - 292 d.cV	254.4 - 350 d.cV	296.8 - 409 d.cV	339.2 - 468 d.cV	381.6 - 526 d.cV
Nominal energy	64.0 kWh	80.0 kWh	96.0 kWh	112.0 kWh	128.0 kWh	144.0 kWh
Usable energy(95% DOD) ^①	60.8 kWh	76.0 kWh	91.2 kWh	106.4 kWh	121.6 kWh	136.8 kWh
Rated charge/ discharge power	32.0 kW	40.0 kW	48.0 kW	56.0 kW	64.0 kW	72.0 kW
Recommend charge / discharge current	157 d.c.A					
Max. charge / discharge current ^②	173 A					
Cycle life (95% DOD) ^③	> 8000 Cycles					

	TS-HS1600	TS-HS1760	TS-HS1920	TS-HS2080	TS-HS2240
GENERAL INFORMATION					
Scalability	10	11	12	13	14
Nominal voltage	512 d.c.V	563.2 d.c.V	614.4 d.c.V	665.6 d.c.V	716.8 d.c.V
Battery voltage range	424 - 584 d.cV	466.4 - 643 d.cV	508.8 - 701 d.cV	551.2 - 760 d.cV	593.6 - 818 d.cV
Nominal energy	160.0 kWh	176.0 kWh	192.0 kWh	208.0 kWh	224.0 kWh
Usable energy(95% DOD) ^①	152.0 kWh	167.2 kWh	182.4 kWh	197.6 kWh	212.8 kWh
Rated charge/ discharge power	80.0 kW	88.0 kW	96.0 kW	104.0 kW	112.0 kW
Recommend charge / discharge current	157 d.c.A				
Max. charge / discharge current ^②	173 A				
Cycle life (95% DOD) ^③	> 8000 Cycles				

ENVIRONMENT LIMIT	
Charge temperature	0 - 53°C
Discharge temperature	-20 - 53°C
Cooling concept	Smart air cooling
Storage temperature	-20 - 30°C (12 months) 30 - 50°C (6 months)
Relative humidity	5 – 95% (non-condensing)
Max. operating altitude	3000 m
Installation type	Stackable
Ingress protection	IP20
Environment	Indoor
BMS	
Model	HS160-BA
Dimensions (WxHxD)	495 × 228 × 800 mm
Net weight	33 (±1)kg
BATTERY MODULE	
Battery model	HS160-PA
Battery type	LFP
Module capacity	16.0 kWh
Dimensions (WxHxD)	495 × 228 × 800 mm
Net weight	117.5 (±1) kg
COMMUNICATION	
Communication interfaces	CAN2.0、RS485
STANDARD	
Certifications	IEC 62619, IEC 62477, IEC 63056, IEC 61000, UL9540A, UN38.3
ACCESSORIES (BASE)	
Dimensions (W × H × D)	495 × 50 × 800 mm
Net weight	10.7 (±1)kg

*Recommended minimum configuration: 7 battery modules for Aelio 49.9K/50K, and 8 battery modules for Aelio 60K/61K.

① Test conditions: 95% DOD, 0.2C charge & discharge @+25°C

② Current is affected by the number of batteries connected in parallel as well as temperature and SOC

③ Test conditions: 25±2°C,0.5C charge & discharge,70%EOL

