





PARTNER

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AELIO+HR140

49.9kW/50kW/60kW/61kW
100.3kWh~401.4kWh

SolaX Split C&I Energy Storage Solution

X3-AELIO



Flexible Configuration

- Customizable Battery Setup: Batteries can be flexibly configured according to customer site requirements, supporting both indoor and outdoor installations, as well as rack-mounted and stacked installations
- Parallel Operation: Supports up to 10 parallel systems, meeting power requirements from 49.9 kW to 600 kW
- Battery Options: Two battery choices available, catering to single system capacities ranging from 100.3 kWh to 401.4 kWh
- PV Oversizing: Supports up to 200% PV oversizing



Safe and Reliable

- Three-Phase Imbalance: Inverter supports 100% three-phase imbalance
- Long-Term Overload: Inverter supports 110% long-term overload
- Seamless Switching: Inverter supports 10ms on-grid/off-grid switching, ensuring uninterrupted power supply for onsite loads
- Off-Grid Overload: Inverter supports 150% off-grid overloading



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 2030.5, OpenADR and API*
- Generator Control: Work seamlessly with generator to save fuel and back up

* 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				
Nominal PV input voltage	650 V				
MPPT voltage range ^②	160 ~ 950 V				
Start-up voltage	200 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	72.3 A	72.0 A	72.5 A	87.0 A	88.4 A
Max. output apparent power	49.9 kVA	49.9 kVA	55 kVA	66 kVA	66 kVA
Max. output continuous current	83.2 A	76.0 A	83.3 A	100.0 A	100.0 A
Nominal AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V				
Nominal 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%				

X3-AELIO-49.9K

X3-AELIO-49.9K-P

X3-AELIO-50K

X3-AELIO-60K

X3-AELIO-61K

BATTERY					
Battery type	Lithium				
Battery voltage range	180 ~ 820 V				
Max. charge / discharge current	160 A (80 A × 2)				
EPS (OFF-GRID) OUTPUT					
Rated EPS output voltage, frequency	230 / 400 V, 220 / 380 V, 50 Hz / 60 Hz				
Rated EPS output power	49.9 kVA	49.9 kVA	50.0 kVA	60.0 kVA	61.0 kVA
Peak EPS output power	55 kVA, continuous 75 kVA, 10s	55 kVA, continuous 75 kVA, 10s	55 kVA, continuous 75 kVA, 10s	66 kVA, continuous 90 kVA, 10s	66 kVA, continuous 90 kVA, 10s
Switchover time	< 10 ms				
EFFICIENCY					
Max. efficiency	98.0%				
European efficiency	97.2%				
ENVIRONMENT LIMIT					
Ingress protection	IP66				
Operating ambient temperature range ^④	-35 ~ 60°C				
Max. operating altitude	3000 m				
Relative humidity	0 ~ 100% RH (condensing)				
Overvoltage Category	Mains: III, Battery: II, PV: II				
GENERAL					
Dimensions (W × H × D)	820 × 670 × 257 mm				
Net weight	< 100 kg	< 105 kg	< 100 kg	< 105 kg	< 105 kg
Cooling concept	Smart air cooling				
Communication interfaces	RS485, CAN, Ripple Control, DI, DO				
Topology	Non-isolated				
Certificates and approvals	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)	Yes				
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

④ Derating above +45°C

TSYS-HR140



T-HR1003
T-HR1146
T-HR1290
T-HR1433
T-HR1576
T-HR1720
T-HR1863
T-HR2007

SYSTEM SPECIFICATION

	T-HR1003	T-HR1146	T-HR1290	T-HR1433	T-HR1576	T-HR1720	T-HR1863	T-HR2007
Module quantity	7	8	9	10	11	12	13	14
Nominal capacity [kWh]	100.3 kWh	114.6 kWh	129.0 kWh	143.3 kWh	157.6 kWh	172.0 kWh	186.3 kWh	200.7 kWh
Usable energy (90%DOD) ^①	90.3 kWh	103.1 kWh	116.1 kWh	129.0 kWh	141.8 kWh	154.8 kWh	167.7 kWh	180.6 kWh
Nominal voltage	358.4 V	409.6 V	460.8 V	512 V	563.2 V	614.4 V	665.6 V	716.8 V
Operating voltage range	291 ~ 408 V	332 ~ 467 V	374 ~ 526 V	416 ~ 584 V	457 ~ 642 V	499 ~ 700 V	540 ~ 759 V	582.4 ~ 817.6 V
Nominal operation current ^②	140							
Maximum operation current ^{②③}	140							
Nominal power ^③	50 kW	57 kW	65 kW	72 kW	79 kW	86 kW	93 kW	100 kW
Depth of discharge	90%							
Model	TB-HR140							
Module energy	14.3 kWh							
Rated module voltage	51.2 V							
Module capacity	280 Ah							
Battery type	LiFePO4							
Dimension (W x H x D)	455 × 228 × 731 mm							

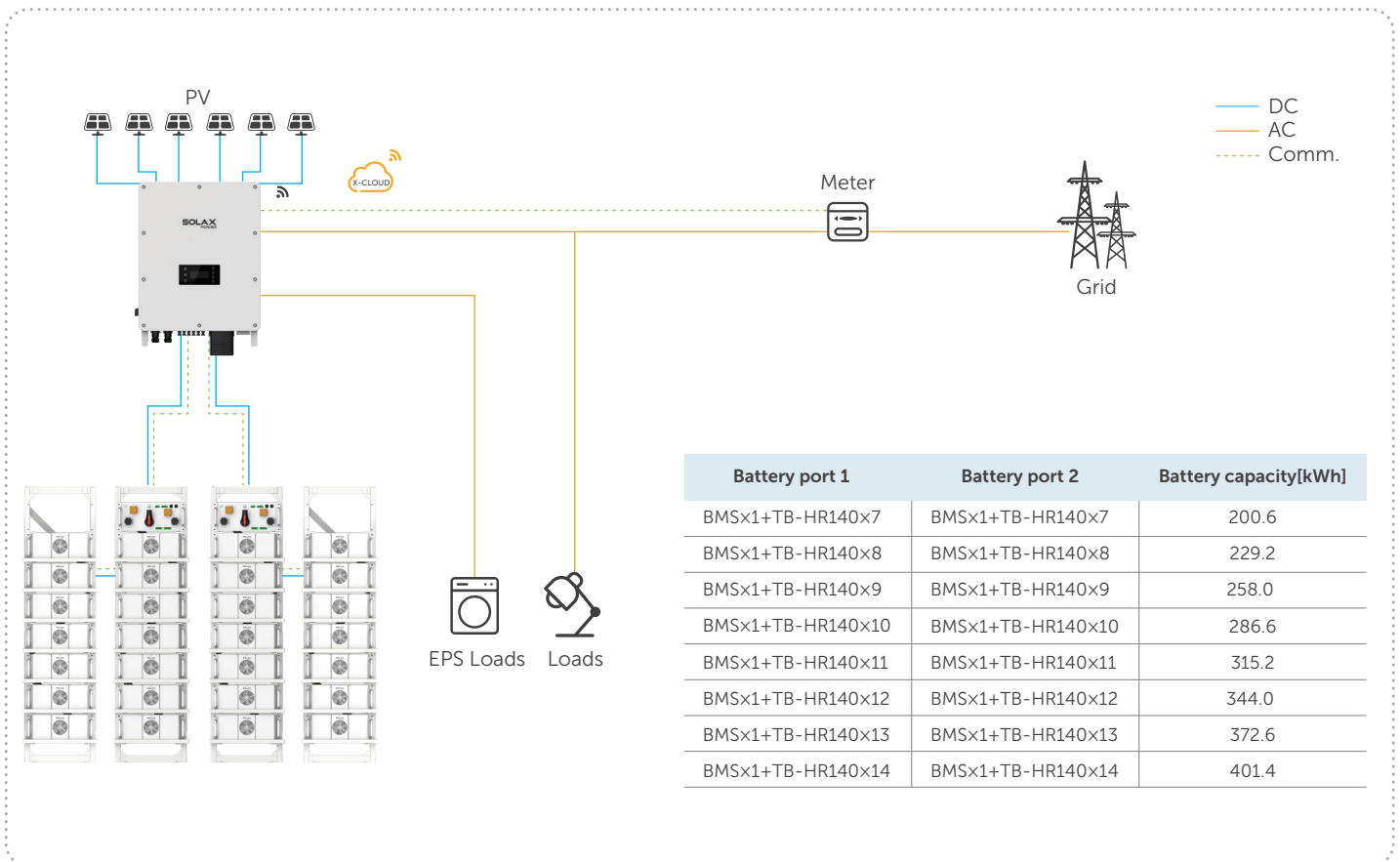
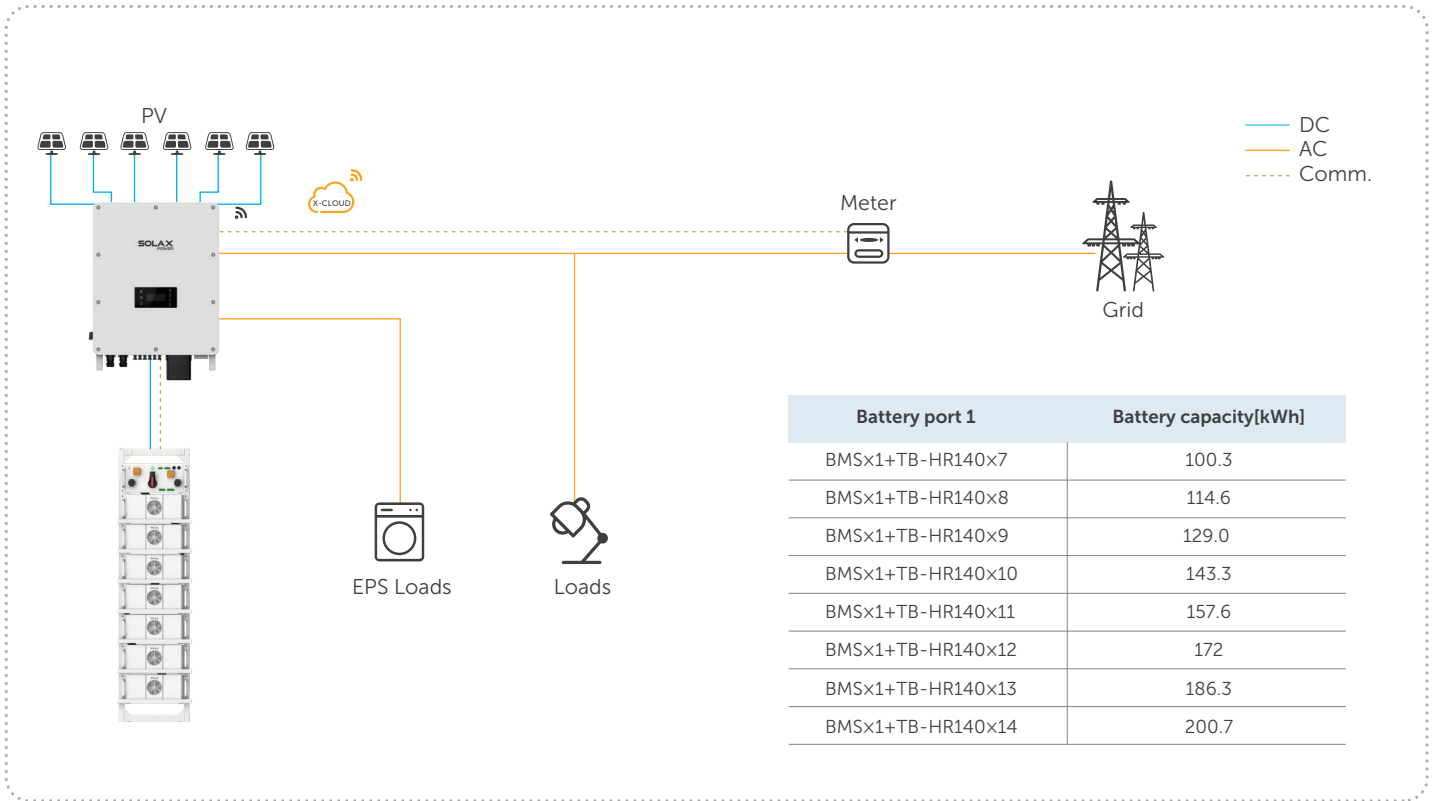
BMS

Model	TBMS-R15
Dimension (W x H x D)	461 × 228 × 778 mm
Weight	31.3 kg

GENERAL SPECIFICATION

Cycle Life (90% DOD)	6000
Charge / Discharge Temperature Range (Without Heating)	0°C to 53°C (Charge) -20°C to 53°C (Discharge)
Communication interfaces	CAN
Installation type	Rack Mounting
Relative humidity	0 ~ 95%(RH)
Altitude	<3000 m
Environment	Indoor
Protection degree	IP20
Safety	EN 62477, IEC 62619, IEC 61000-6-1/2/3/4
Transport testing requirement	UN38.3

BATTERY MODULE COMBINATION TABLE



① Test conditions: 90% DOD, 0.2C charger & discharger @ 25°C

② Max. charge / discharge current may be variant with different inverter models

③ Nominal / Maximum operation current and nominal / maximum power derating will occur related to temperature or SOC



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