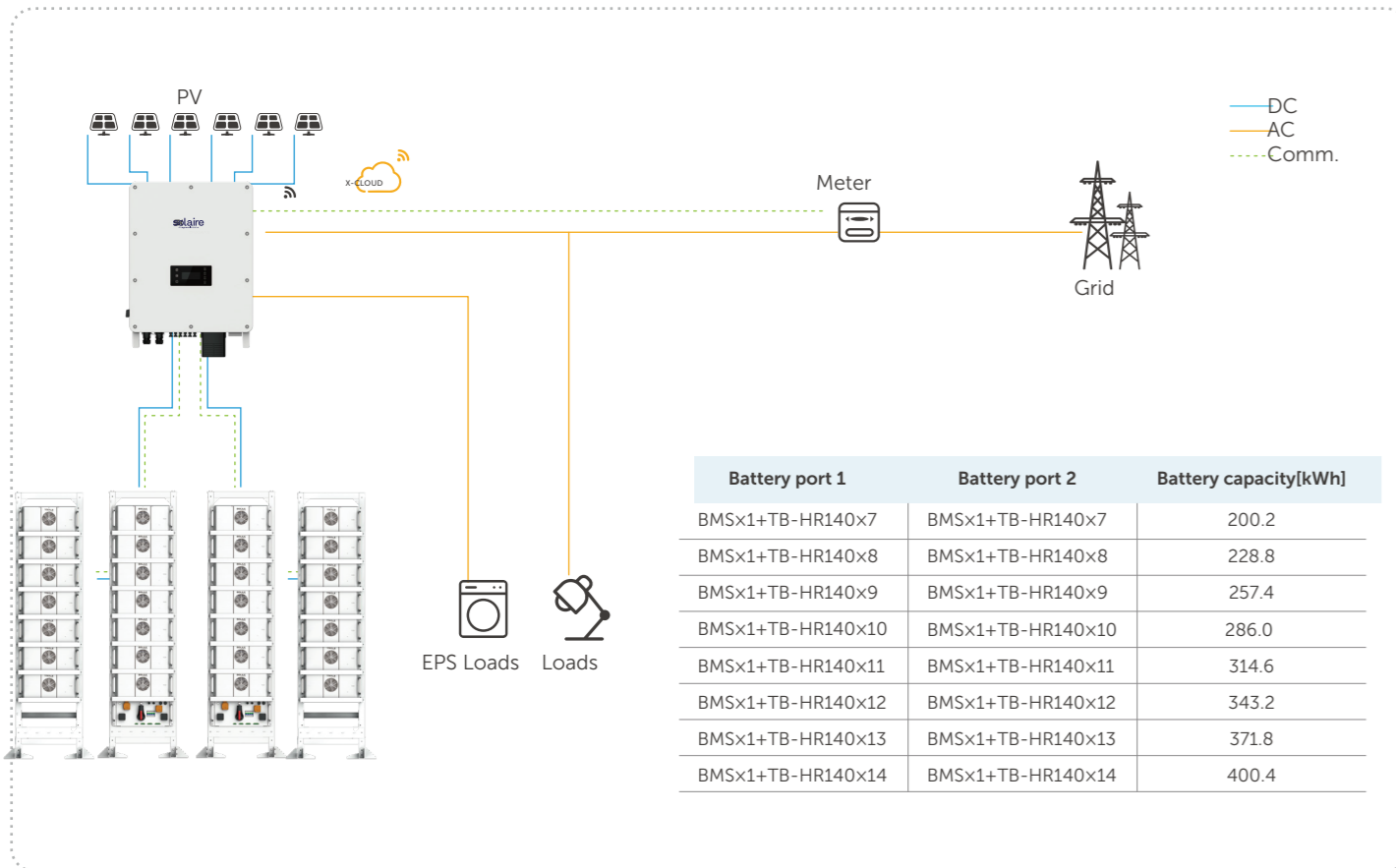
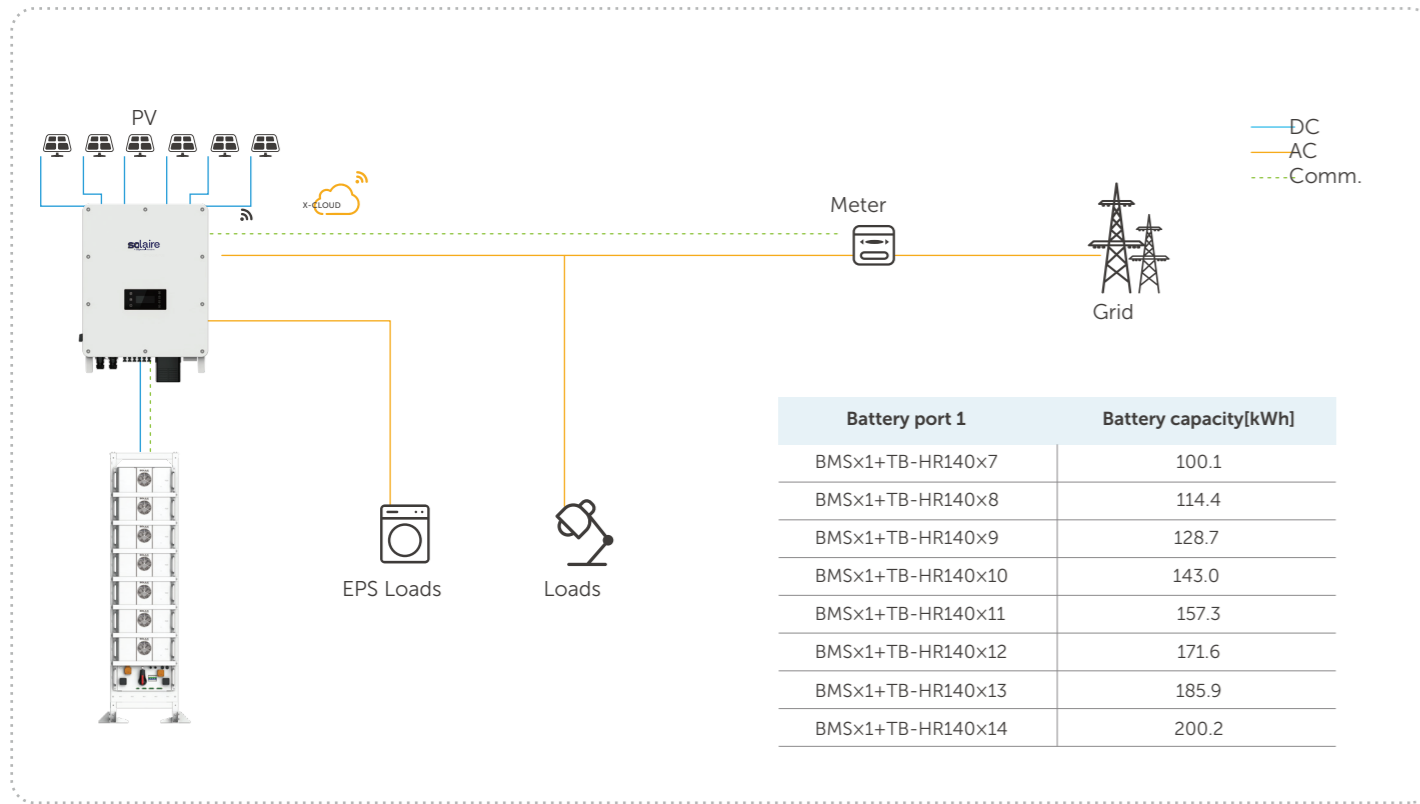


BATTERY MODULE COMBINATION TABLE



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

# solaire

A L agnuvo Initiative

Powering India's Solar Future

www.solairefuture.com

Global: +86 571-56260008  
 PL: +48 662 430 292

AU: +61 1300 476 529  
 DE: +49(0)6142 967 3009

UK: +44 2476 586998  
 NED:+31 (0) 8527 37932

info@solaxpower.com  
 service@solaxpower.com

V1.4 Information may be subject to modify without notice.  
 650.00116.00



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# AELIO+HR140

49.9kW/50kW/60kW/61kW  
 100.1kWh~400.4kWh

Solaire Split C&I Energy Storage Solution

Global: +91 1800 8338 666

www.solairefuture.com

info.solaire@lagnuvo.com

## X3-AELIO



### Flexible Configuration

- Customizable battery setup: batteries can be flexibly configured according to customer site requirements, supporting indoor and rack-mounted 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.
- 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

\* 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
<b>PV INPUT</b>					
Max. recommended PV array power	100 kWp	120 kWp	100 kWp	120 kWp	
Max. PV input voltage <sup>①</sup>	1000 V				
Rated PV input voltage	650 V				
MPPT voltage range <sup>②</sup>	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				
<b>AC INPUT &amp; OUTPUT (ON-GRID)</b>					
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 <sup>③</sup>	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
<b>BATTERY</b>					
Battery type	LFP				
Battery voltage range	180 ~ 820 V				
Max. charge / discharge current	160 A (80 A × 2)				
<b>EPS (OFF-GRID) OUTPUT</b>					
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				
<b>EFFICIENCY</b>					
Max. efficiency	98.0%				
European efficiency	97.2%				
<b>ENVIRONMENT LIMIT</b>					
Ingress protection	IP66				
Operating 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				
<b>GENERAL</b>					
Dimensions (W × H × D)	670 × 820 × 257 mm				
Net weight	< 100 kg	< 105 kg	< 100 kg	< 105 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				
Certificates and approvals	CE, VDE4105, G99, AS4777, EN50549, CEI 0-21, IEC61727, PEA/MEA, NRS-097-2-1, RD1699, TOR				
<b>PROTECTION</b>					
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

## TSYS-HR140



T-HR100.1 T-HR114.4 T-HR128.7 T-HR143.0 T-HR157.3 T-HR171.6 T-HR185.9 T-HR200.2

<b>SYSTEM SPECIFICATION</b>								
Nominal voltage	358.4 d.c.V	409.6 d.c.V	460.8 d.c.V	512 d.c.V	563.2 d.c.V	614.4 d.c.V	665.6 d.c.V	716.8 d.c.V
Operating voltage range	292 - 409 d.c.V	333 - 468 d.c.V	375 - 526 d.c.V	416 - 584 d.c.V	458 - 643 d.c.V	500 - 701 d.c.V	541 - 760 d.c.V	583 - 818 d.c.V
Nominal energy	100.1 kWh	114.4 kWh	128.7 kWh	143.0 kWh	157.3 kWh	171.6 kWh	185.9 kWh	200.2 kWh
Usable energy(90% DOD) <sup>①</sup>	90.1 kWh	103.0 kWh	115.8 kWh	128.7 kWh	141.6 kWh	154.4 kWh	167.3 kWh	180.2 kWh
Rated charge/ discharge power	50.2 kW	57.4 kW	64.6 kW	71.7 kW	78.9 kW	86.1 kW	93.2 kW	100.4 kW
Recommend charge / discharge current	140 A							
Max. charge / discharge current <sup>②</sup>	154 A							
Cycle life (90% DOD) <sup>③</sup>	> 6000 Cycles							
<b>ENVIRONMENT LIMIT</b>								
Operating temperature range	0 - 53°C (charge)		-20 - 53°C (discharge)					
Cooling concept	Natural cooling							
Storage temperature	-20 - 30°C (12 months)				30 - 50°C (6 months)			
Relative humidity	5 - 85% (non-condensing)							
Max. operating altitude	3000 m							
Installation type	Rack							
Ingress protection	IP20							
Environment	Indoor							
<b>BMS</b>								
Model	TBMS-R15							
Operating voltage vange	250 - 1000 d.c.V							
Dimensions (WxHxD)	523 × 226 × 805 mm							
Net weight	37 kg							
<b>RACK</b>								
Dimensions (WxHxD)	576 × 2287 × 823 mm							
Net weight	91 kg							
<b>BATTERY MODULE</b>								
Battery model	TB-HR140							
Battery type	LFP							
Scalability	7	8	9	10	11	12	13	14
Module capacity	14.3 kWh							
Dimensions (WxHxD)	523 × 226 × 805 mm							
Net weight	115 kg							
<b>BATTERY MODULE</b>								
Communication interfaces	CAN							
<b>STANDARD</b>								
Safety	IEC 62619, IEC 62477, UN38.3							

- ① Test conditions: 90% 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  
 ④ Regardless of whether the internal and external fans are on or off, the typical value is the maximum value obtained from the test results.